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USAF BIOENVIRONMENTAL NOISE DATA HANDBOOK. VOLUME 94. A-6A AIRC--ETC(U)  
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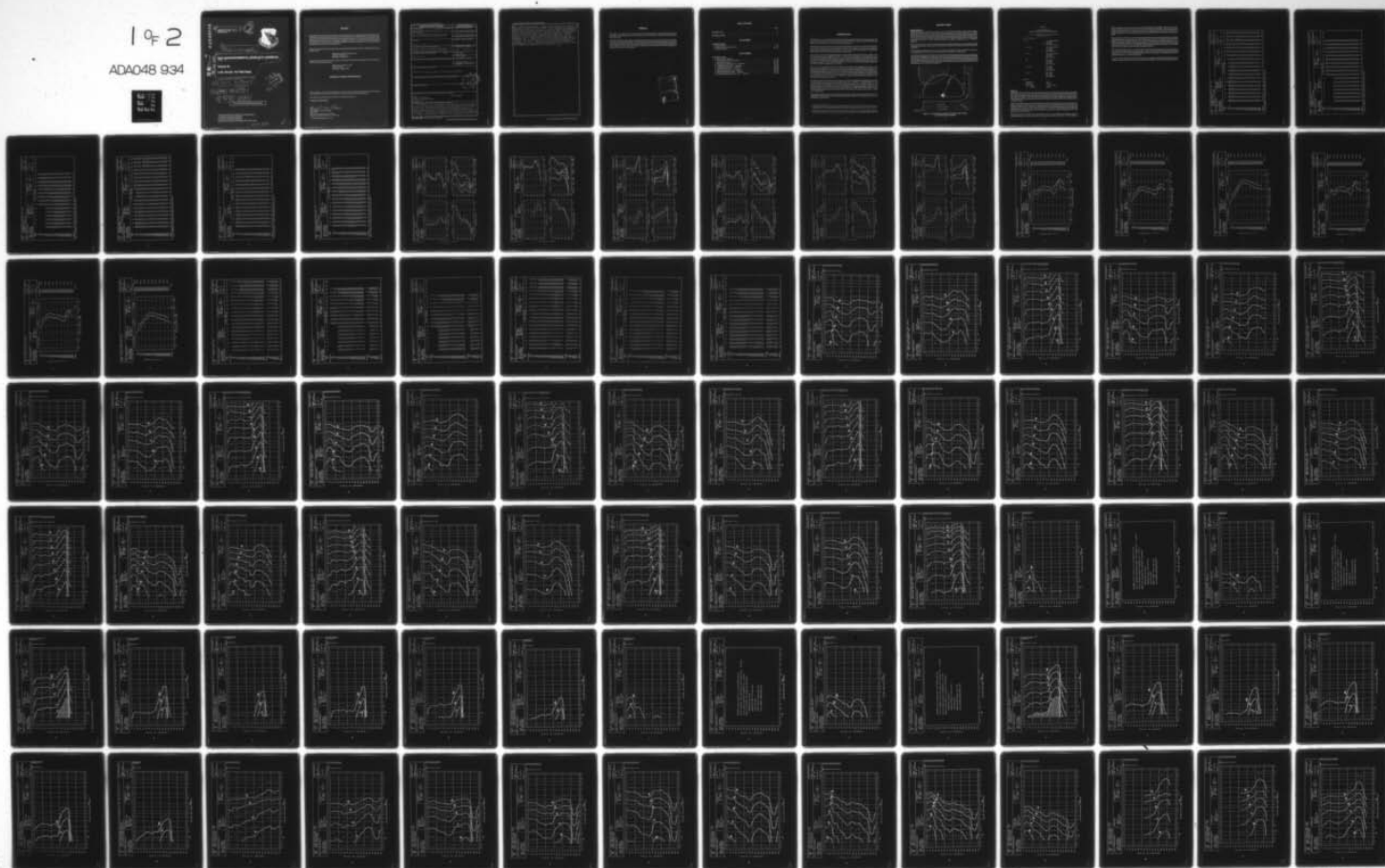
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Volume 94.

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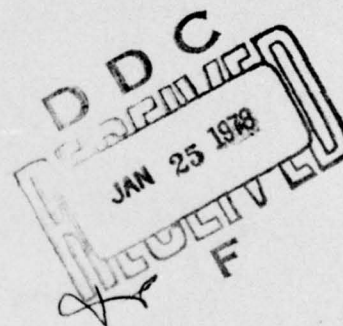
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AEROSPACE MEDICAL DIVISION  
AIR FORCE SYSTEMS COMMAND  
WRIGHT-PATTERSON AIR FORCE BASE, OHIO 45433

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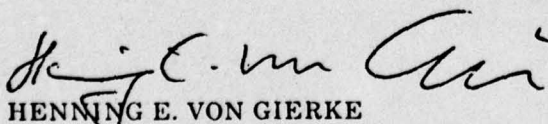
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This technical report has been reviewed and is approved for publication.

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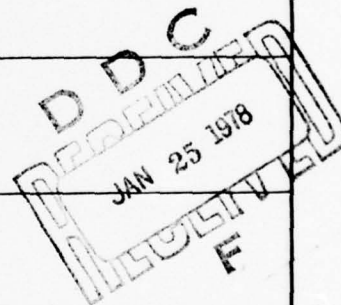
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20. ABSTRACT (Continue on reverse side if necessary and identify by block number) → The USN A-6A is a carrier based attack bomber aircraft powered by two J52-P-8A turbojet engines. This report provides far-field measured and extrapolated data defining both physical and psycho-acoustic measures of the bioacoustic environments produced by this aircraft operating on a ground runup pad for six engine/power conditions. Far-field data measured at 19 locations are normalized to standard meteorological conditions and extrapolated from 75-		



8000 meters to derive sets of equal-value contours as a function of angle and distance from the source. These contours are measures of overall and band sound pressure levels, C-weighted and A-weighted sound levels, preferred speech interference level, perceived noise level, and limiting times for total daily exposure of personnel with and without standard Air Force ear protectors. Refer to Volume 1 of this handbook, "USAF Bioenvironmental Noise Data Handbook, Vol 1: Organization, Content and Application", AMRL-TR-75-50(1) 1975, for discussion of the objective and design of the handbook, the types of data presented, measurement procedures, instrumentation, data processing, definitions of quantities, symbols, equations, applications, limitations, etc.



## PREFACE

This report was prepared by the Biodynamic Environment Branch, Aerospace Medical Research Laboratory, under Project/Task 723104, Measurement and Prediction of Noise Environments of Air Force Operations.

The author gratefully acknowledges Mr. John Cole for his assistance in preparing this report, Capt Nick Farinacci, Mr. Harald Hille, and Mr. Jerry Speakman for their assistance in acquiring the raw data, Mr. Keith Kettler, Mr. Henry Mohlman and Mr. David Eilerman of the University of Dayton for assistance in the mechanics of data processing, and Mrs. Peggy Massie and Mr. Mike Patterson for assistance in typing and preparation of the graphics.

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## INTRODUCTION

The USN A-6A is a carrier based attack bomber aircraft powered by two J52-P-8A turbojet engines. The aircraft was manufactured by the Grumman Aerospace Corporation and the engines by the Pratt and Whitney Aircraft Division of the United Aircraft Corporation.

This volume provides measured and extrapolated data defining bioacoustic environments produced by this aircraft during ground runup operations. Such data are essential to evaluate ear protection requirements, limiting personnel exposure times, voice communication capabilities, and annoyance problems associated with ground runups of the A-6A aircraft.

This volume is one of a series published by the Aerospace Medical Research Laboratory (AMRL) under the same report number (AMRL-TR-75-50) as a multi-volume handbook that quantifies the noise environments produced at flight/ground crew locations and in surrounding communities by operations of military aircraft and ground support equipment. The far-field, community-type noise data in the handbook describe the noise produced during *ground operations* of aircraft, ground support equipment, and other ground-based equipment or facilities.

Volume 1 of this handbook discusses the objectives and design of the handbook, the types of data presented, measurement procedures, instrumentation, data processing, definitions of quantities, symbols, equations, applications, limitations, etc. Volume 2 provides a method and data for adjusting the handbook's far-field noise data, which are for standard meteorological conditions (15°C temperature, 70% rel humidity, 0.760 meter Hg barometric pressure), to derive comparable data for other meteorological conditions. Refer to *Volumes 1 and 2* (references 1 and 2) for such information because it is not repeated in other handbook volumes.

A cumulative index lists those aerospace systems contained in the handbook, and identifies the specific volumes containing each type of environmental noise data available (i.e., inflight/flight crew and passenger noise, near-field/ground crew noise, far-field/community noise). Volume numbers are assigned sequentially as individual volumes are published. This index is periodically updated as individual volumes are published and is available upon request from AMRL/BBE, Wright-Patterson AFB, OH 45433. Organizations on the distribution list for the handbook will automatically receive a copy of each updated index.

Direct any questions concerning the technical data in this report and other handbook volumes to: AMRL/BBE, Wright-Patterson AFB, OH 45433; AUTOVON 78-53675 or 78-53664; Commercial (513) 255-3675 or (513) 255-3664.

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1. Cole, John N., *USAF Bioenvironmental Noise Data Handbook Volume 1: Organization, Content and Application*, AMRL-TR-75-50 (1), Aerospace Medical Research Laboratory, Wright-Patterson Air Force Base, Ohio, 1975.
  2. Cole, John N., *USAF Bioenvironmental Noise Data Handbook, Volume 2: Procedure to Evaluate Effects of Non-standard Meteorological Conditions on Far-Field Noise*, AMRL-TR-75-50 (2), AMRL, WPAFB, OH, 1975.

## FAR-FIELD NOISE

### MEASUREMENTS

AMRL acquired the far-field data during a 1-hour test period thus keeping similar meteorological conditions throughout the test. Figure 1 shows the ground runup area (taxiway), ground cover, aircraft orientation and microphone measurement sites on each semicircle. The center of the 75 meter radius semicircles used in surveying the J52-P-8A engines was on the ground directly below the intersection of the aircraft's centerline and the plane passing through both engines' exhaust-nozzle exit. The ground runup area did not have a blast deflector; therefore, the engines' exhausts were in a "free-flow" condition.

Table 1 provides cockpit readouts of engine characteristics (RPM, fuel flow, etc.) for each power setting used in the far-field tests. Also listed in this table are the surface meteorological conditions during data acquisition.

All microphone measurement sites are in the acoustic far-field of the source where the sound wavefronts spherically diverge and the noise source may be regarded as a point source.

A portable microphone/tape-recorder sytem was used to sequentially record the noise at each far-field location. The microphone was attached to a hand-held pole, pointed at the source ( $0^\circ$  angle of incidence) and vertically scanned from 0.5 to 3 meters for a period of 5-10 seconds during data acquisition at each microphone location. These samples were then time-integrated to derive a root-mean-square sound pressure level. Vertical scanning and time-integrating together reduce anomalies frequently present in data acquired by a fixed height microphone.

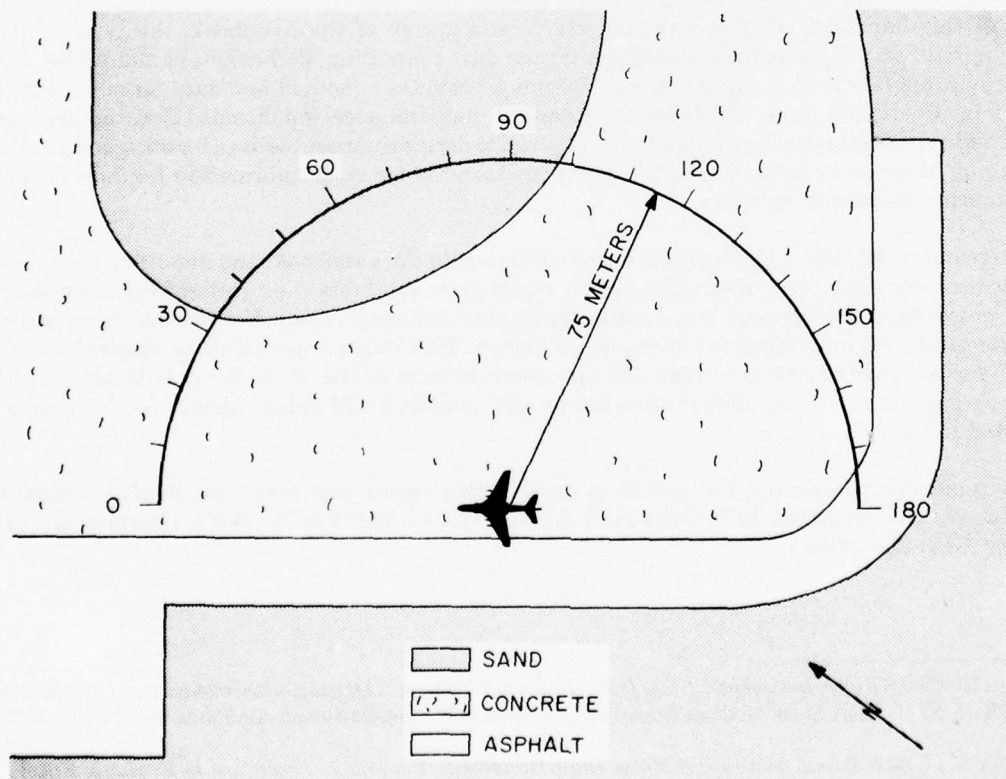


Figure 1. Far-Field Measurement Locations on the Taxiway at ALF, San Clemente Island

TABLE 1  
TEST CONDITIONS  
FOR FAR-FIELD NOISE MEASUREMENTS

A-6A Aircraft, Ground Runups, ALF, San Clemente Island  
Tail #157019, 17 May 1977

*Aircraft Engine Operation*

Idle	#2 (Starboard) Engine 60 % RPM C, Exhaust 800 LBS/HR, Fuel Flow
75% Runup	#2 (Starboard) Engine 75 % RPM 300 C, EGT 1500 LBS/HR, FF
Military	#2 (Starboard) Engine 99 % RPM 650 C, EGT 8000 LBS/HR, FF
Idle	Both Engines 60 % RPM 260 C, EGT 850 LBS/HR, FF
75% Runup	Both Engines 75 % RPM 300 C, EGT 1500 LBS/HR, FF
Military	Both Engines 98.5 % RPM 645 C, EGT 8000 LBS/HR, FF

*Meteorology*

Temperature	15.0 C
Bar Pressure	0.764 M Hg
Rel Humidity	78 %
Wind — Speed	3.1 M/Sec (6 KTS)
— Direction	270 Deg

## RESULTS

Table 2 lists the overall and 1/3 octave band SPL measured at the far-field locations under meteorological conditions at the time of the test. Data in all other figures and tables are based on these levels. These data were normalized to 100 meters distance and standard meteorological conditions (15 C temperature, 70% relative humidity, 0.760 meter Hg barometric pressure) and used to derive the graphic data in Figure 2, which provides a compact summary of the far-field noise characteristics of the A-6A aircraft in a standard format.

Figure 3 and Table 3 present two basic acoustic measures, the acoustic power level and the directivity index, respectively. The acoustic power level describes the power radiated by the source as a function of frequency. The directivity index is a standard acoustical engineering measure that describes the geometric way in which the source radiates this power as a function of both frequency and angle from source. These basic source measures are primarily of interest for acoustical engineers and noise generation/control specialists.

Estimates of the noise levels for intermediate power settings (e.g., 85% RPM) and/or different number of engines operating (e.g., single engine) can be determined as explained in Volume 1 of this handbook.



Figures 4 through 10 are sets of equal noise contours describing seven different measures of noise as a function of angle and distance from the source for standard day meteorology. They are respectively, overall sound pressure level, C-weighted sound level, A-weighted sound level, perceived noise level, speech interference level, permissible exposure times for personnel and octave band sound pressure levels.

Data excessively influenced by spurious background/electronic noise were eliminated from all figures and tables. No data are presented at the 170/180 degree locations for a single engine operating at 75% RPM, 150 through 180 degree locations for a single engine operating at military power, nor at the 160/170/180 degree locations for both engines operating at 75% and military power settings because of turbulent air flow behind the aircraft. Typically, the A-weighted levels for these angles are 10 to 20 dBA below the level measured at the preceding microphone location.

Test personnel performed noise surveys during quiet periods when the background noise was minimal, e.g., early in the morning when no other aircraft or engine test stands were operating. Data eliminated because they were near the background/electronic noise were generally not significant because the levels were so low (e.g., Table 2, idle power).

Volume 2 of the handbook describes the influence of meteorology on far-field noise environments, and provides, if required, the factors necessary to adjust the handbook's standard meteorological day data.

TABLE: MEASURED SOUND PRESSURE LEVEL (DB)																	IDENTIFICATION:		
1/3 OCTAVE BAND																			
DISTANCE = 75 METERS																	OMEGA 1.4		
																	TEST 75-002-003		
NOISE SOURCE/SUBJECT:																	RUN 01		
( OPERATION:																			
( IDLE POWER																			
( 60% RPM																	TEMP = 15 C		
( SINGLE ENGINE																	BAR PRESS = .764 M HG		
( FREE FLOW																	REL HUMID = 78 %		
METEOROLOGY:																			
ANGLE (DEGREES)																			
FREQ (HZ)	0	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180
25													63<	64<	68<	68<	69<	69<	67<
31.5	55<	55<	57<	57<	56<	56<	59	71	70	71	71	75	74	75	78	77	75	77	76
40	56<	56<	57<	56<	57<	58<	59<	68<	70	68<	72	72	73	75	73	74	73	73	75
50	55<	54<	55<	55<	56	53<	55<	55<	54<	56	66	69	71	73	73	72	69	69	73
63	55<	56<	57<	55<	56<	54<	54<	55<	55<	55<	57<	69<	72	74	74	70<	68<	67<	74
80	67	66	68	67	66	64	66	66	65	67	69	71	72	74	75	71	64	63	70
100	74	74	75	74	72<	72<	72<	70<	70<	73<	76	77	78	77	78	72<	69<		
125	72	72	73	71	71	70	69	69	69	71	74	75	75	76	76	72	55<	54<	63<
160	75	74	74	74	72	71	70	69	68	71	75	74	75	77	77	71	53<	57<	61
200	72	71	73	73	71	71	69	69	70	71	75	77	81	81	80	73	60<	64	75
250	72	72	73	72	71	70	69	70	70	72	75	76	80	79	79	74	57<	61	73
315	74	74	74	72	69	67	66	67	67	71	77	77	76	78	77	72	54<	55	63
400	74	74	75	72	72	70	69	69	67	71	77	76	76	76	72	72	55	55	61
500	76	75	75	74	75	71	71	71	70	73	78	78	78	77	74	72	58	56	62
630	78	77	77	77	76	71	69	71	70	73	77	76	78	75	74	69	61	55	63
800	81	79	77	76	74	71	70	68	66	70	74	75	76	72	72	66	56	55	62
1000	80	77	78	76	74	72	71	69	65	69	71	74	73	72	70	64	53	54	62
1250	77	74	75	73	70	69	68	66	64	67	68	71	69	69	65	61	51	52	60
1600	80	79	79	76	73	71	70	68	64	67	68	68	67	68	64	61	50	51	58
2000	85	87	87	80	80	74	73	71	67	69	71	68	68	67	64	63	51	51	57
2500	89	90	93	82	82	78	74	72	71	72	73	70	71	66	64	63	53	52	57
3150	96	99	99	89	87	83	76	75	74	76	75	73	71	67	66	66	56	53	61
4000	86	86	85	84	82	81	74	74	69	71	74	73	73	70	65	66	53	53	58
5000	83	85	85	80	78	77	72	70	68	71	74	71	71	69	65	64	51	52	58
6300	85	89	86	82	78	76	72	69	67	70	72	72	70	66	63	63	51	51	56
8000	80	81	81	77	76	74	70	68	64	68	71	70	68	65	61	61	48<	48<	53
10000	75	76	75	72	68	69	65	65	62	67	70	70	68	65	60	58	46<	48<	54
OVERALL	98	100	101	93	91	88	85	84	82	85	88	88	89	89	88	85	79	80	83

< LEVEL CORRECTED TO REMOVE BACKGROUND/ELECTRONIC NOISE.

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TABLE: MEASURED SOUND PRESSURE LEVEL (DB)																
1/3 OCTAVE BAND																
DISTANCE = 75 METERS																
NOISE SOURCE/SUBJECT:																
OPERATION:																
A-6A AIRCRAFT																
J52-P-8A ENGINE																
FAR FIELD NOISE																
METEOROLOGY:																
TEMP = 15 C																
BAR PRESS = .764 M HG																
REL HUMID = 78 %																
PAGE 2																
IDENTIFICATION:																
OMEGA 1.4																
TEST 75-002-003																
RUN 02																
05 MAY 75																
PAGE 2																
FREQ (HZ)																
ANGLE (DEGREES)																
0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170 180																
25																
31.5																
40																
50																
63																
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630																
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1250																
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2000																
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6300																
8000																
10000																
OVERALL																

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TABLE: MEASURED SOUND PRESSURE LEVEL (DB)																			
1/3 OCTAVE BAND																			
DISTANCE = 75 METERS																			
NOISE SOURCE/SUBJECT:																			
( OPERATION: )																			
( MILITARY POWER )																			
( 99% RPM )																			
( SINGLE ENGINE )																			
( FREE FLOW )																			
METEOROLOGY: TEMP = 15 C																			
BAR PRESS = .764 M HG																			
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2000																			
2500																			
3150																			
4000																			
5000																			
6300																			
8000																			
10000																			
OVERALL																			
109 113 114 114 114 115 114 115 115 115 118 123 127 131 115 110																			
LEVEL CORRECTED TO REMOVE BACKGROUND/ELECTRONIC NOISE.																			

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25	64<	63<	64<	66<	64<	63<	64<	64<	64<	70	72	73	63<	66<	67<	69<	69<	65<	67<	68<	
31.5	65<	67<	70	70	70	72	73	73	74	70	72	73	73	76	76	76	76	73	73	74	
40	67<	69<	71	72	73	73	72	71	67<	70<	71	71	71	75	76	80	80	74	78	80	
50	64<	65<	66	66	66	68	67	67	66	67	69	69	71	73	74	73	74	67	69	72	
63	64<	63<	65<	66<	66<	68	67<	66<	65<	67<	70<	68<	72	74	74	73	66<	65<	69<		
80	65	66	66	68	67	68	68	68	68	65	67	69	69	70	73	74	71	63	63	65	
100	72<	74	74	74	73<	74	74	74	74	70<	72<	76	75	77	77	77	73<				
125	70	71	71	71	71	71	71	71	71	69	71	73	74	74	77	76	71	56<	57<	55<	
160	72	73	71	74	72	72	70	69	69	69	71	75	76	74	79	76	70	56<	56<	57<	
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250	70	71	71	73	72	71	71	71	71	73	71	75	76	79	80	80	73	60	58<	65	
315	70	71	71	71	67	67	67	67	68	70	72	76	76	76	77	76	71	54<	54<	60	
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8000	77	80	76	76	74	74	71	67	66	68	71	73	69	66	63	60	50	47<	50		
10000	72	75	71	69	69	67	64	61	64	67	73	72	68	66	61	58	49	47<	50		
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TEMP = 15 C																			
BAR PRESS = .764 M HG																			
REL HUMID = 78 %																			
PAGE 2																			
ANGLE (DEGREES)																			
FREQ (HZ)	0	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180
25	64<	65<	64<	64<	63<	66<	65<	65<	55<	68<	70<	70<	71<	75	76	78			
31.5	65<	66<	67<	67<	67<	67<	70	68<	68<	71	71	73	74	78	81	81			
40	69<	68<	68<	68<	69<	70	71	72	72	73	76	77	79	83	83	85			
50	68	69	69	70	70	71	71	73	71	75	75	78	81	83	84	86			
63	70<	70<	71	70<	72	72	71	72	74	73	77	79	81	83	87	88	87		
80	70	71	71	72	72	72	72	75	74	79	82	84	87	90	89	89			
100	73<	74	75	75	75	74	76	77	77	82	85	87	90	92	91	90			
125	75	75	75	75	76	76	76	77	79	84	86	89	91	92	90	87			
160	78	79	79	80	80	78	77	79	80	83	87	88	89	92	88	83			
200	76	78	79	80	79	79	76	79	80	83	85	88	88	89	85	78			
250	77	76	78	78	78	77	77	79	80	84	87	89	88	88	83	75			
315	75	76	77	78	76	77	76	79	81	84	87	89	88	88	81	71			
400	76	77	78	78	76	77	78	79	81	84	87	89	88	87	79	68			
500	77	78	78	78	78	78	78	79	80	84	87	89	88	86	77	67			
630	79	80	81	81	80	80	78	79	81	84	88	89	88	85	76	66			
800	79	79	80	81	80	79	78	79	79	83	86	87	86	82	74	65			
1000	79	79	81	82	80	79	79	78	79	83	85	87	84	81	73	65			
1250	82	82	81	81	80	79	77	77	78	80	83	84	80	78	70	63			
1600	83	85	83	83	81	79	78	77	78	79	82	83	80	77	69	63			
2000	85	86	83	82	81	80	78	78	77	79	81	81	79	76	68	62			
2500	86	88	85	85	83	82	80	80	78	80	83	81	78	75	68	61			
3150	89	95	90	92	90	90	86	87	81	83	85	82	80	77	71	62			
4000	90	94	92	90	87	86	82	82	79	82	84	81	78	74	68	61			
5000	98	101	99	96	93	90	86	84	80	82	83	80	77	73	66	61			
6300	90	94	93	92	93	92	87	86	80	82	83	81	78	74	65	61			
8000	87	90	88	88	87	87	84	83	78	81	82	80	76	72	62	60			
10000	88	89	87	86	84	84	80	80	78	79	80	76	72	68	59	57			
OVERALL	101	104	102	100	99	98	94	94	93	96	98	100	99	100	98	96			

< LEVEL CORRECTED TO REMOVE BACKGROUND/ELECTRONIC NOISE.

TABLE: MEASURED SOUND PRESSURE LEVEL (DB)																			IDENTIFICATION:	
1/3 OCTAVE BAND																			OMEGA 1.4	
DISTANCE = 75 METERS																			TEST 75-002-003	
NOISE SOURCE/SUBJECT:																			RUN 06	
OPERATION:																			METEOROLOGY:	
MILITARY POWER																			TEMP = 15 C	
99% RPM																			BAR PRESS = .764 M HG	
BOTH ENGINES																			REL HUMID = 78 %	
FREE FLOW																			PAGE 2	
ANGLE (DEGREES)																				
FREQ	0	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180	
(HZ)																				
25	81	79	79	81	81	83	83	84	86	87	90	92	96	97	100	100				
31.5	81	81	82	83	85	84	86	87	88	89	90	96	98	100	103	101				
40	83	85	84	84	87	87	89	89	89	92	94	98	102	102	103	102				
50	83	84	85	85	87	87	89	89	89	92	95	99	103	104	102	98				
63	85	87	86	88	87	89	89	91	91	93	98	104	108	107	103	98				
80	86	87	88	89	89	90	91	91	92	96	101	107	110	108	101	96				
100	90	91	92	92	92	92	95	95	95	100	104	112	114	109	99	94				
125	90	91	92	93	94	94	95	95	96	103	106	116	117	111	96	91				
160	92	93	94	96	97	97	97	97	99	103	108	116	117	111	93	89				
200	93	94	95	96	96	99	98	98	99	105	112	119	119	107	91	90				
250	95	95	98	98	98	98	98	98	101	102	107	115	121	121	106	94	91			
315	97	96	99	101	100	99	100	101	104	110	116	121	122	104	97	94				
400	105	105	105	105	101	101	100	102	104	111	116	120	123	105	100	94				
500	107	108	107	108	104	105	102	102	104	110	116	119	122	103	97	95				
630	108	109	111	110	108	108	106	105	104	111	117	120	122	103	97	94				
800	106	108	109	110	110	109	109	109	106	112	116	118	120	103	96	91				
1000	103	105	107	108	109	108	107	110	108	112	115	117	118	103	95	90				
1250	101	104	105	106	108	108	107	108	108	111	114	116	116	101	92	89				
1600	100	103	104	105	108	108	106	107	108	112	115	116	116	100	91	88				
2000	98	101	102	104	107	107	106	107	108	111	115	115	115	98	92	89				
2500	97	100	101	103	106	107	105	107	107	110	113	113	114	97	90	87				
3150	95	97	100	101	104	105	104	105	106	109	113	114	114	96	89	86				
4000	95	98	100	101	103	105	104	105	107	109	112	113	113	94	88	86				
5000	94	96	98	98	102	104	102	104	105	106	109	110	111	92	85	83				
6300	92	94	96	96	99	101	100	102	103	104	108	109	109	90	84	81				
8000	90	92	93	94	97	99	98	101	101	104	108	109	109	89	82	81				
10000	86	89	90	91	95	97	96	98	99	100	103	105	106	85	78	76				
OVERALL	114	116	117	117	118	118	117	118	118	122	127	130	131	119	112	109				
LEVEL CORRECTED TO REMOVE BACKGROUND/ELECTRONIC NOISE.																				

LEVEL CORRECTED TO REMOVE BACKGROUND/ELECTRONIC NOISE.





FIGURE: NORMALIZED FARFIELD NOISE LEVELS

2 DISTANCE = 100 METERS

NOISE SOURCE/SUBJECT:

A-6A AIRCRAFT

J52-P-8A ENGINE

FAR FIELD NOISE

OPERATION:

75% RPM

SINGLE ENGINE

FREE FLOW

METEOROLOGY:

TEMP = 15 C

BAR PRESS = .760 M HG

REL HUMID = 70 %

IDENTIFICATION:

OMEGA 1.4

TEST 75-002-003

RUN 02

05 MAY 75

PAGE 6

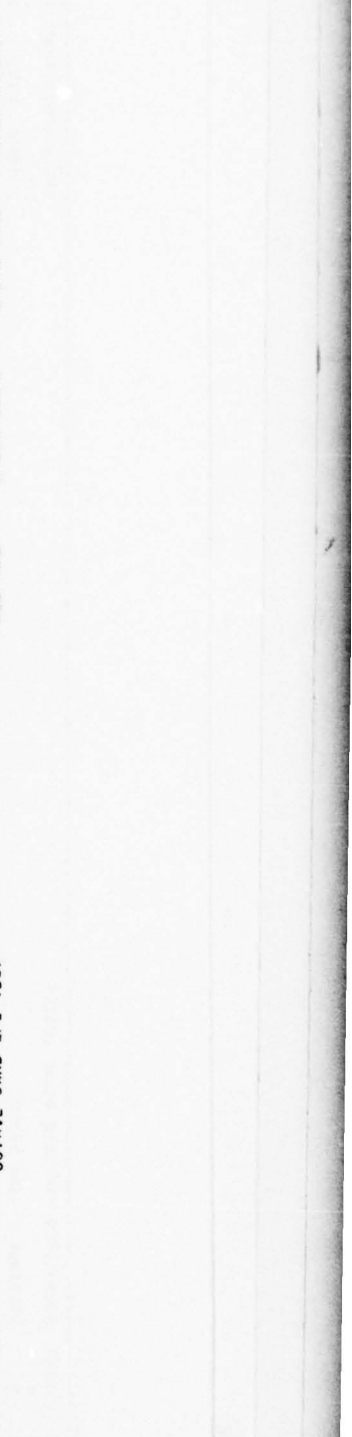
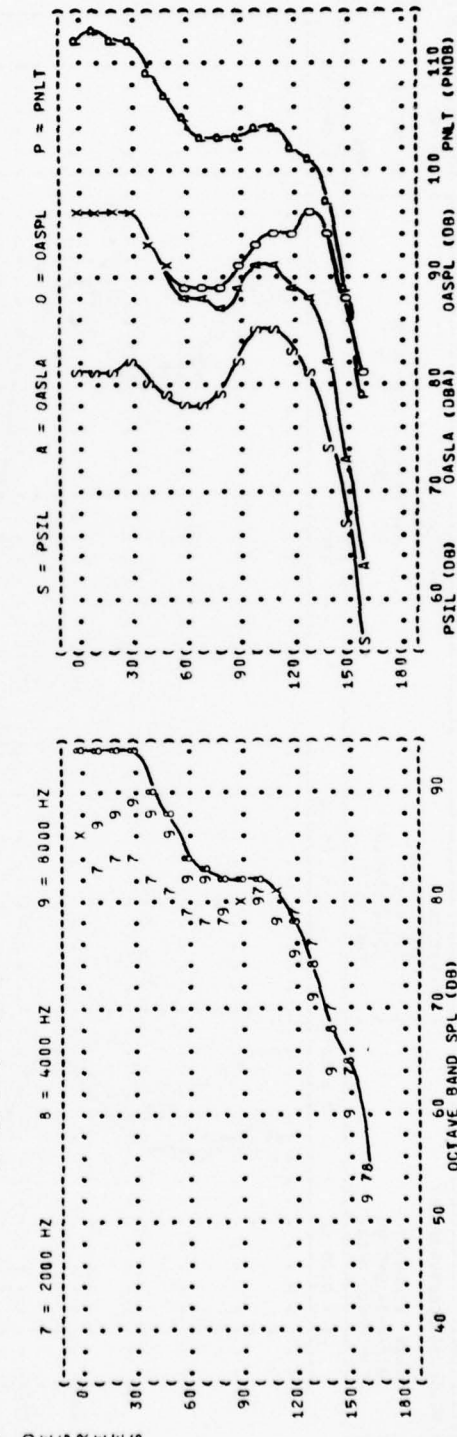
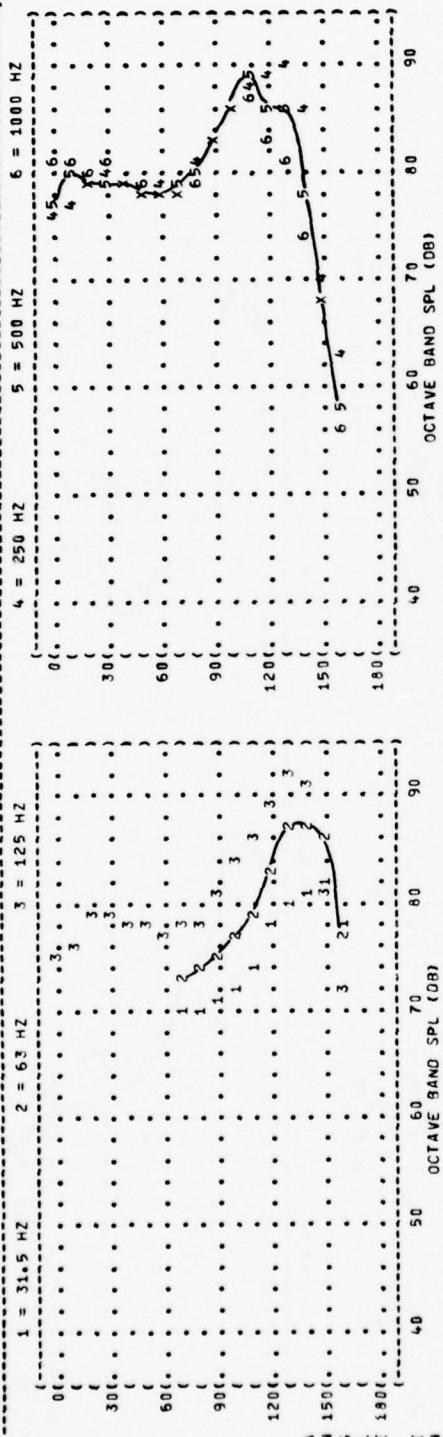


FIGURE: NORMALIZED FARFIELD NOISE LEVELS

2 DISTANCE = 100 METERS

NOISE SOURCE/SUBJECT:

A-6A AIRCRAFT  
J52-P-8A ENGINE  
FAR FIELD NOISE

OPERATION:

MILITARY POWER  
99% RPM  
SINGLE ENGINE  
FREE FLOW

METEOROLOGICAL:

TEMP = 15 C  
BAR PRESS = .760 M HG  
REL HUMID = 70 %

IDENTIFICATION:

OMEGA 1.4  
TEST 75-002-003  
RUN 03  
05 MAY 75  
PAGE 6

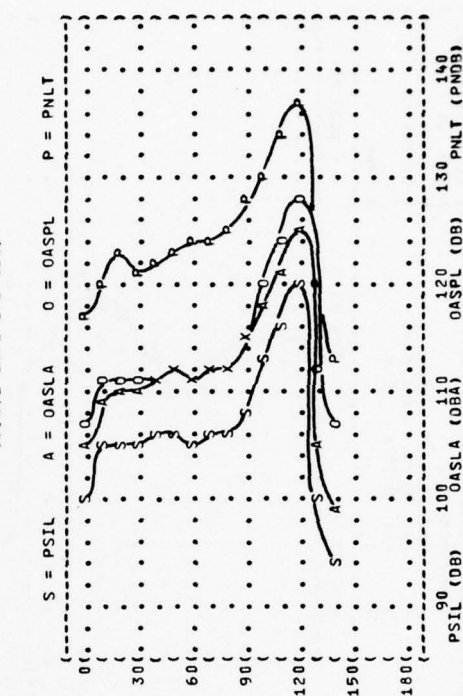
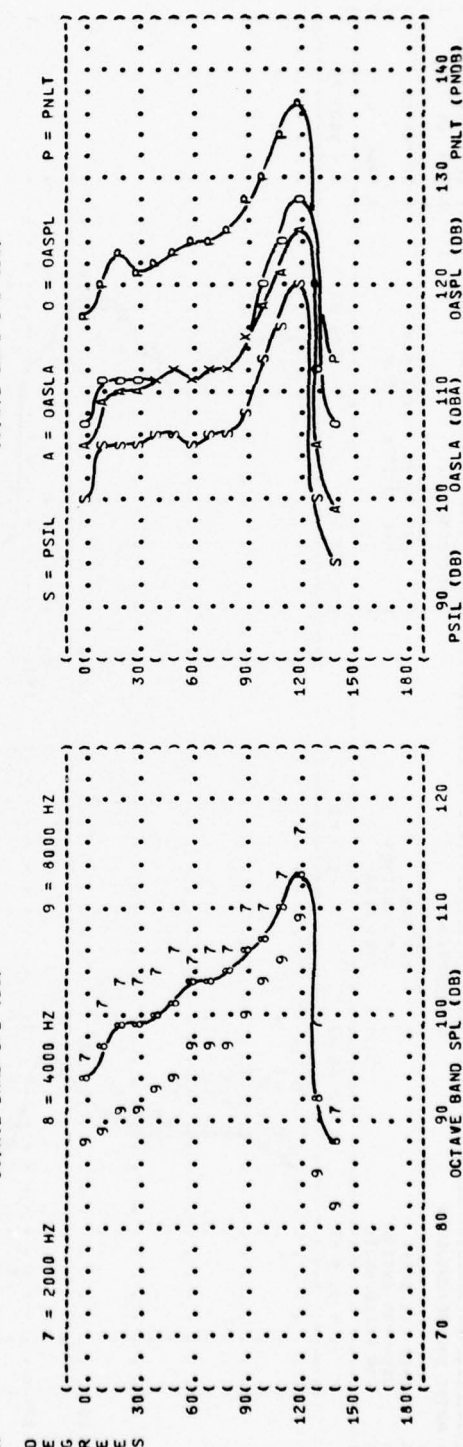
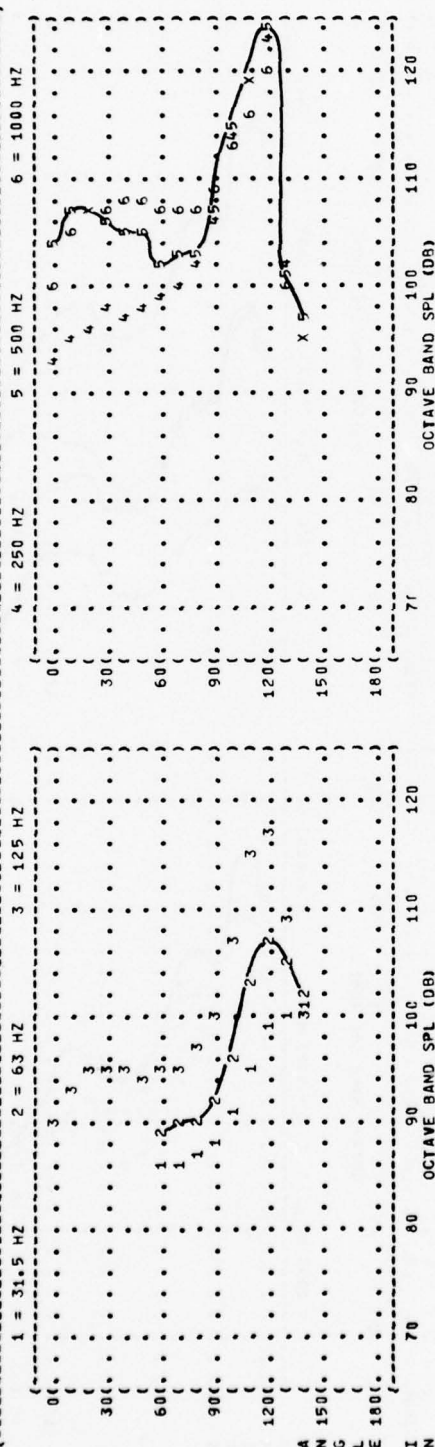


FIGURE 1 NORMALIZED FARFIELD NOISE LEVELS

2 DISTANCE = 100 METERS

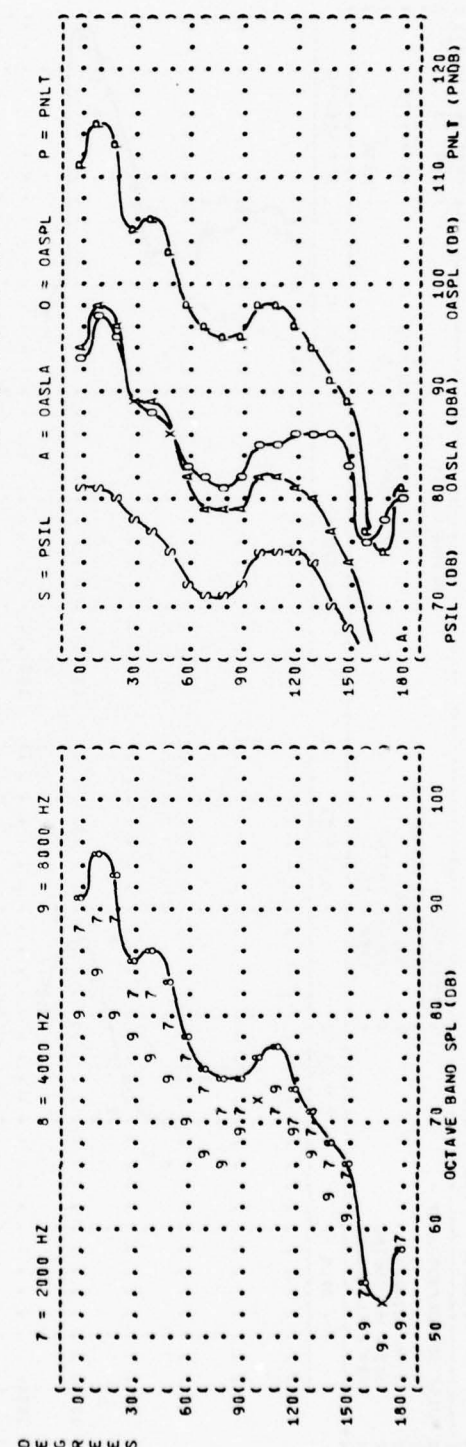
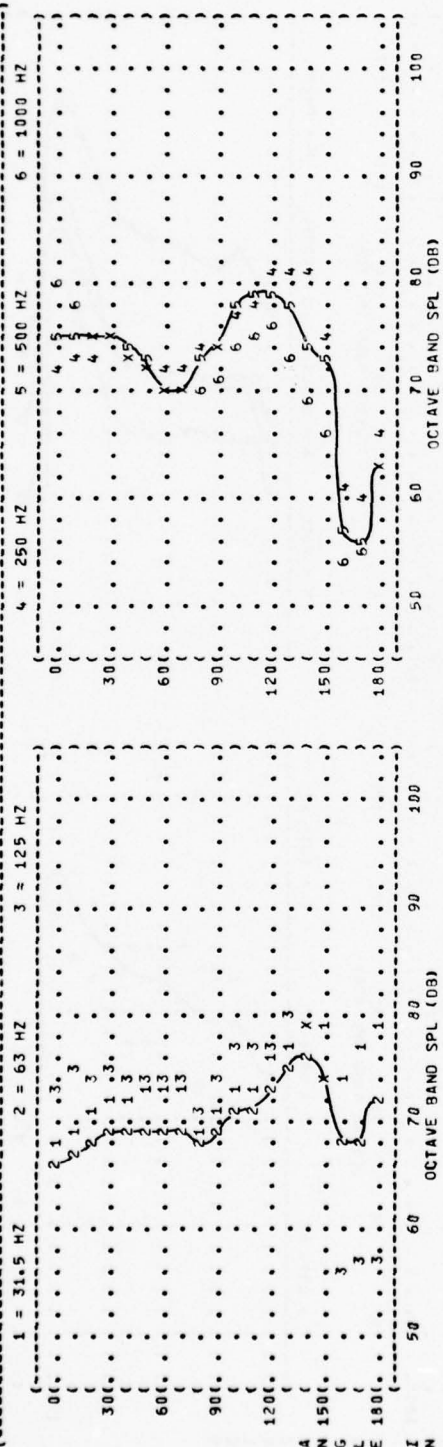
NOISE SOURCE/SUBJECT:

A-6A AIRCRAFT  
J52-P-9A ENGINE  
FAR FIELD NOISE

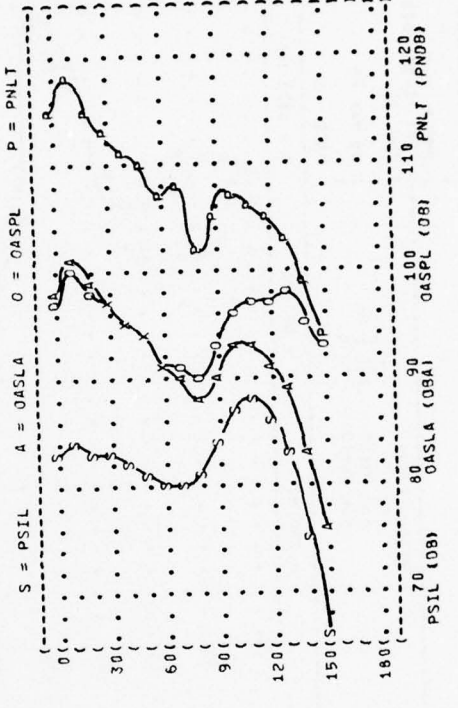
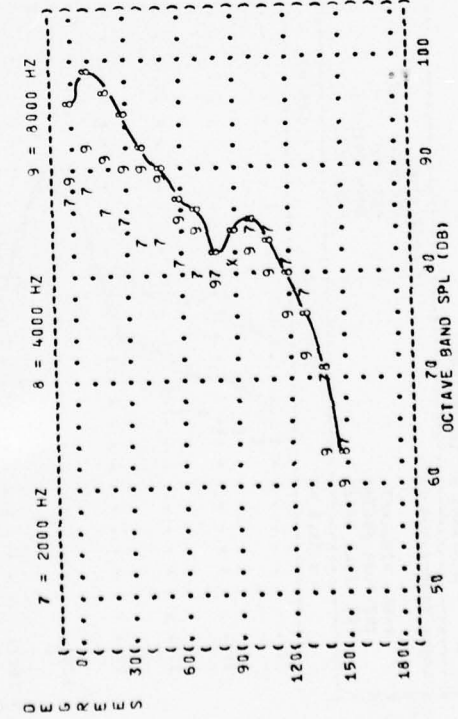
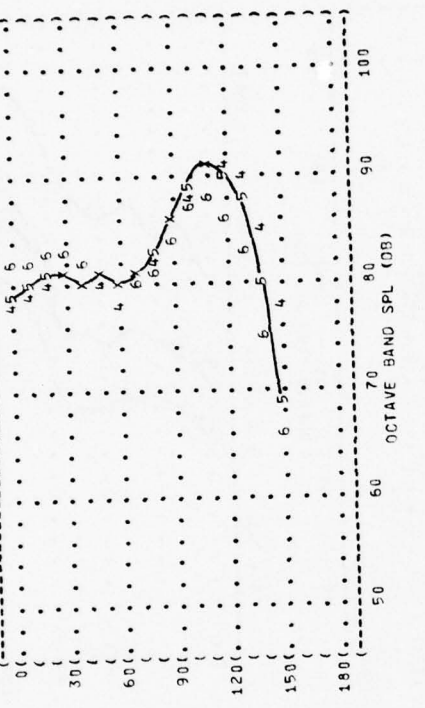
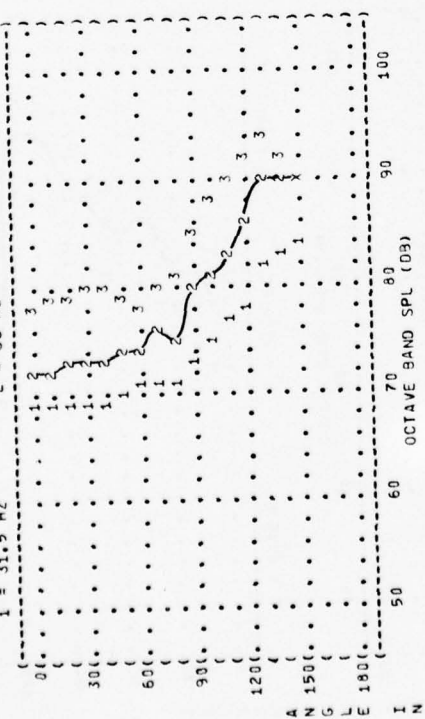
OPERATION:  
IDLE POWER  
60% RPM  
BOTH ENGINES  
FREE FLOW

METEOROLOGY:  
TEMP = 15 C  
BAR PRESS = .760 M HG  
REL HUMID = 70 %

IDENTIFICATION:  
OMEGA 1.4  
TEST 75-002-003  
RUN 04  
05 MAY 75  
PAGE 5



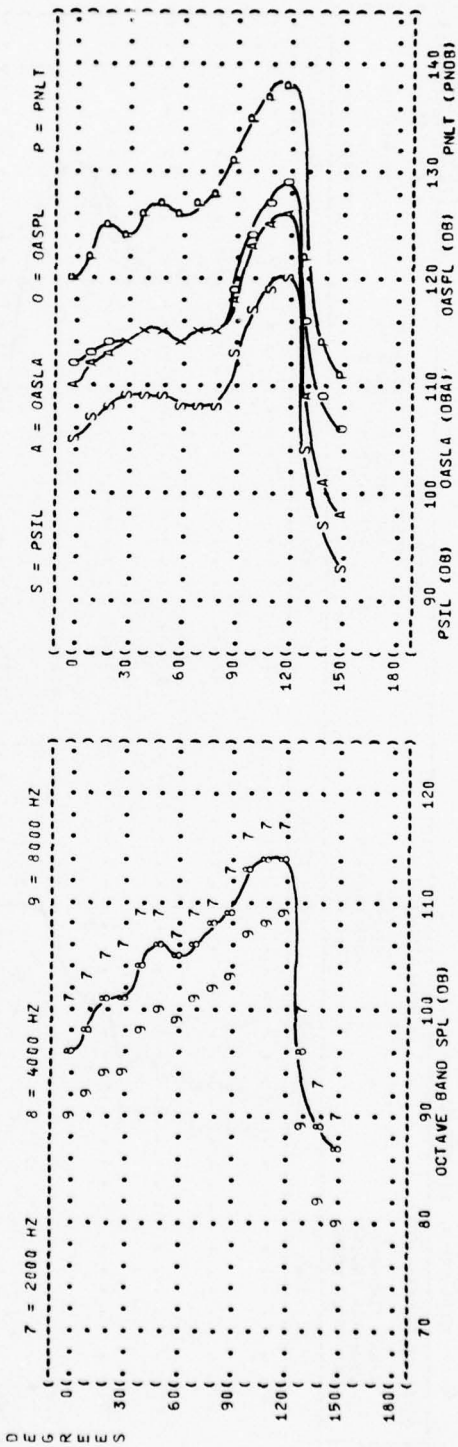
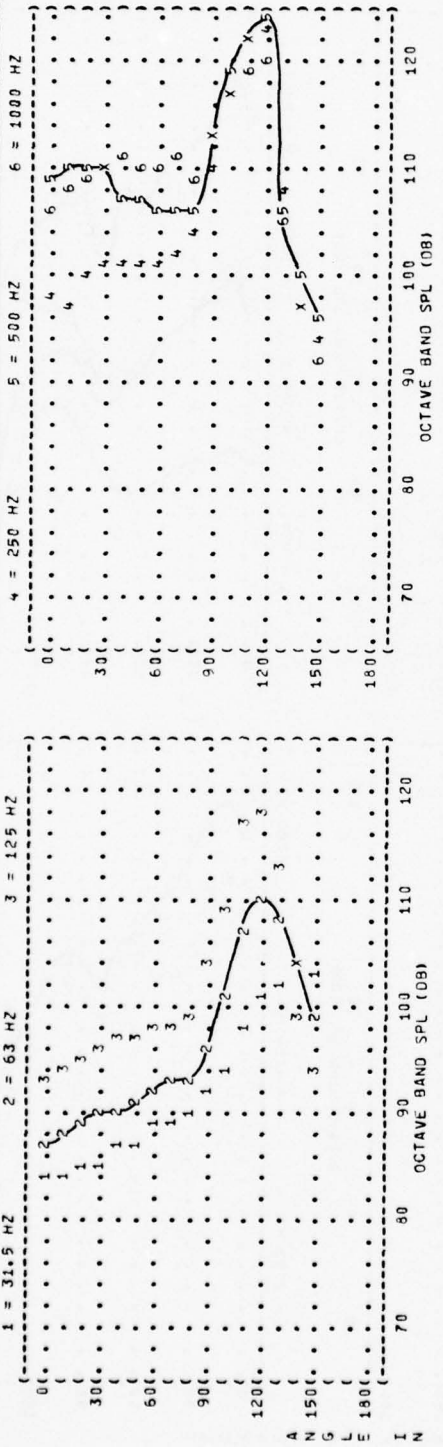
( ( FIGURE: NORMALIZED FARFIELD NOISE LEVELS  
 ( ( 2 DISTANCE = 100 METERS  
 ( ( NOISE SOURCE/SUBJECT:  
 ( ( A-6A AIRCRAFT  
 ( ( J52-P-3A ENGINE  
 ( ( FAR FIELD NOISE  
 ( ( OPERATION:  
 ( ( 75% RPM  
 ( ( BOTH ENGINES  
 ( ( FREE FLOW  
 ( ( METEOROLOGY:  
 ( ( TEMP = 15 C  
 ( ( BAR PRESS = .760 M HG  
 ( ( REL HUMID = 70 %  
 ( ( IDENTIFICATION:  
 ( ( OMEGA 1.4  
 ( ( TEST 75-002-003  
 ( ( RUN 05  
 ( ( 05 MAY 75  
 ( ( PAGE 6  
 ( ( 4 = 250 HZ 5 = 500 HZ 6 = 1000 HZ



PSIL (DB) 70 80 90 100 110 120  
 OASLA (DBA) 70 80 90 100 110 120  
 OASPL (DB) 70 80 90 100 110 120  
 PNLT (PNDB) 70 80 90 100 110 120

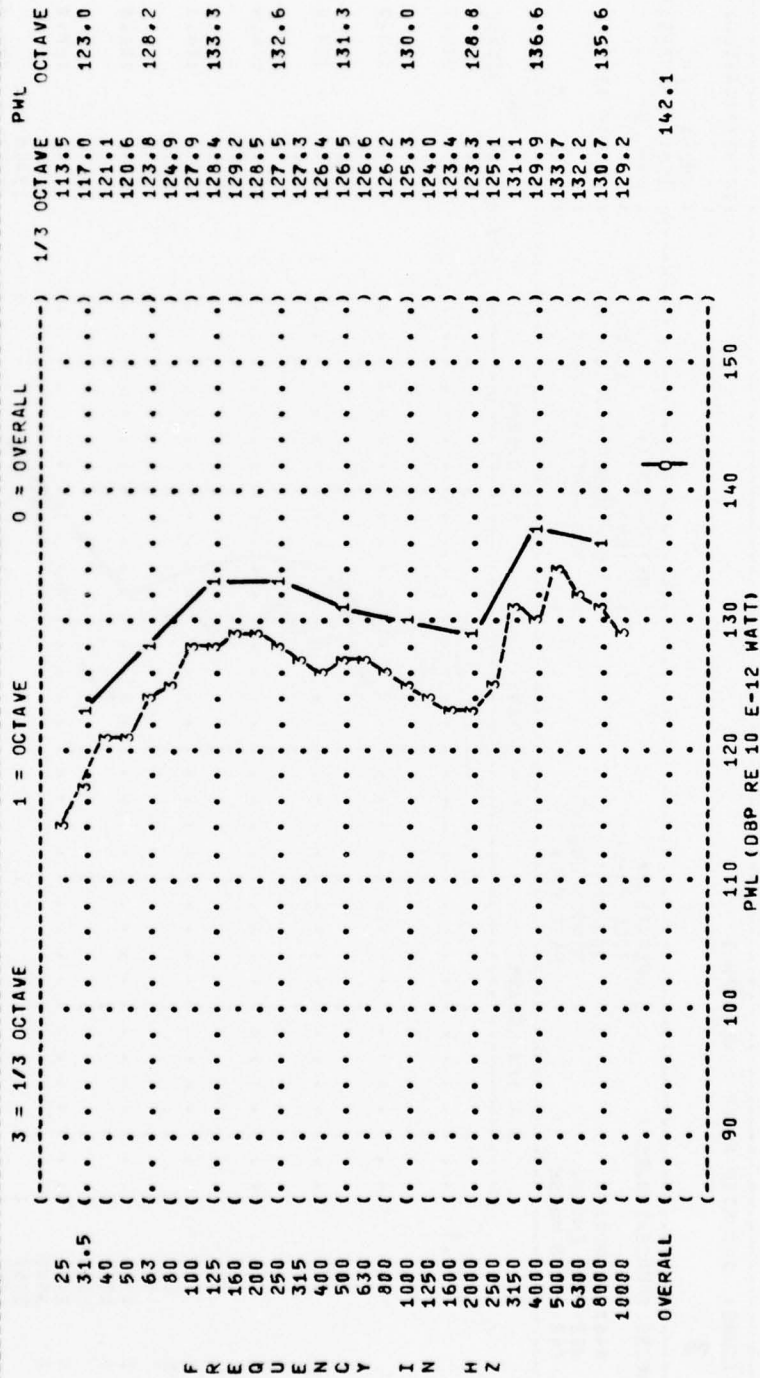


( ( FIGURE: NORMALIZED FARFIELD NOISE LEVELS  
 ( ( 2 DISTANCE = 100 METERS  
 ( ( NOISE SOURCE/SUBJECT:  
 ( ( A-6A AIRCRAFT  
 ( ( J52-P-1A ENGINE  
 ( ( FAR FIELD NOISE  
 ( ( OPERATION:  
 ( ( MILITARY POWER  
 ( ( 99% RPM  
 ( ( BOTH ENGINES  
 ( ( FREE FLOW  
 ( ( METEOROLOGY:  
 ( ( TEMP = 15 C  
 ( ( BAR PRESS = .760 M HG  
 ( ( REL HUMID = 70 %  
 ( ( PAGE 5  
 ( ( IDENTIFICATION:  
 ( ( OMEGA 1.4  
 ( ( TEST 75-002-003  
 ( ( RUN 06  
 ( ( 05 MAY 75  
 ( ( )





( ( FIGURE: ACOUSTIC POWER LEVEL (PWL) ) )  
 ( ( 3 ) )  
 ( ( NOISE SOURCE/SUBJECT: ) )  
 ( ( A-6A AIRCRAFT ) )  
 ( ( J52-P-8A ENGINE ) )  
 ( ( FAR FIELD NOISE ) )  
 ( ( OPERATION: ) )  
 ( ( 75% RPM ) )  
 ( ( SINGLE ENGINE ) )  
 ( ( FREE FLOW ) )  
 ( ( METEOROLOGY: ) )  
 ( ( TEMP = 15 C ) )  
 ( ( BAR PRESS = .764 M HG ) )  
 ( ( REL HUMID = 78 % ) )  
 ( ( IDENTIFICATION: ) )  
 ( ( OMEGA 1.4 ) )  
 ( ( TEST 75-002-003 ) )  
 ( ( RUN 02 ) )  
 ( ( 05 MAY 75 ) )  
 ( ( PAGE 3 ) )



( ( FIGURE: ACOUSTIC POWER LEVEL (PWL) ) )  
 ( ( 3 ) )  
 ( ( NOISE SOURCE/SUBJECT: ) )  
 ( ( A-6A AIRCRAFT ) )  
 ( ( J52-P-8A ENGINE ) )  
 ( ( FAR FIELD NOISE ) )  
 ( ( OPERATION: ) )  
 ( ( MILITARY POWER ) )  
 ( ( 99% RPM ) )  
 ( ( SINGLE ENGINE ) )  
 ( ( FREE FLOW ) )  
 ( ( METEOROLOGY: ) )  
 ( ( TEMP = 15 C ) )  
 ( ( BAR PRESS = .764 M HG ) )  
 ( ( REL HUMID = 78 % ) )  
 ( ( IDENTIFICATION: ) )  
 ( ( OMEGA 1.4 ) )  
 ( ( TEST 75-002-003 ) )  
 ( ( RUN 03 ) )  
 ( ( 05 MAY 75 ) )  
 ( ( PAGE 3 ) )

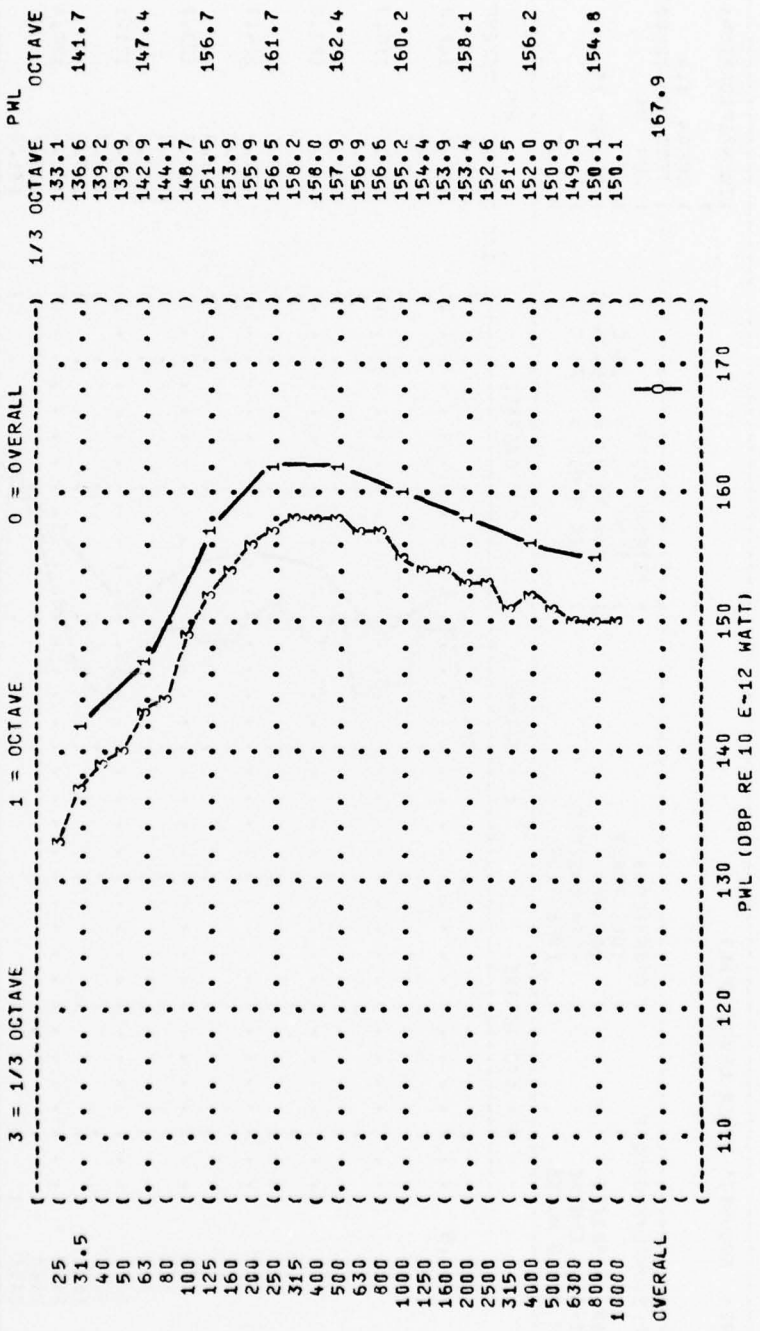




FIGURE: ACOUSTIC POWER LEVEL (PWL)

3

IDENTIFICATION:

OMEGA 1.4

TEST 75-002-003

RUN 04

05 MAY 75

PAGE 3

NOISE SOURCE/SUBJECT:

OPERATION:

TEMP = 15 C

BAR PRESS = .764 M HG

REL HUMID = 78 %

FREE FLOW

3 = 1/3 OCTAVE

1 = OCTAVE

0 = OVERALL

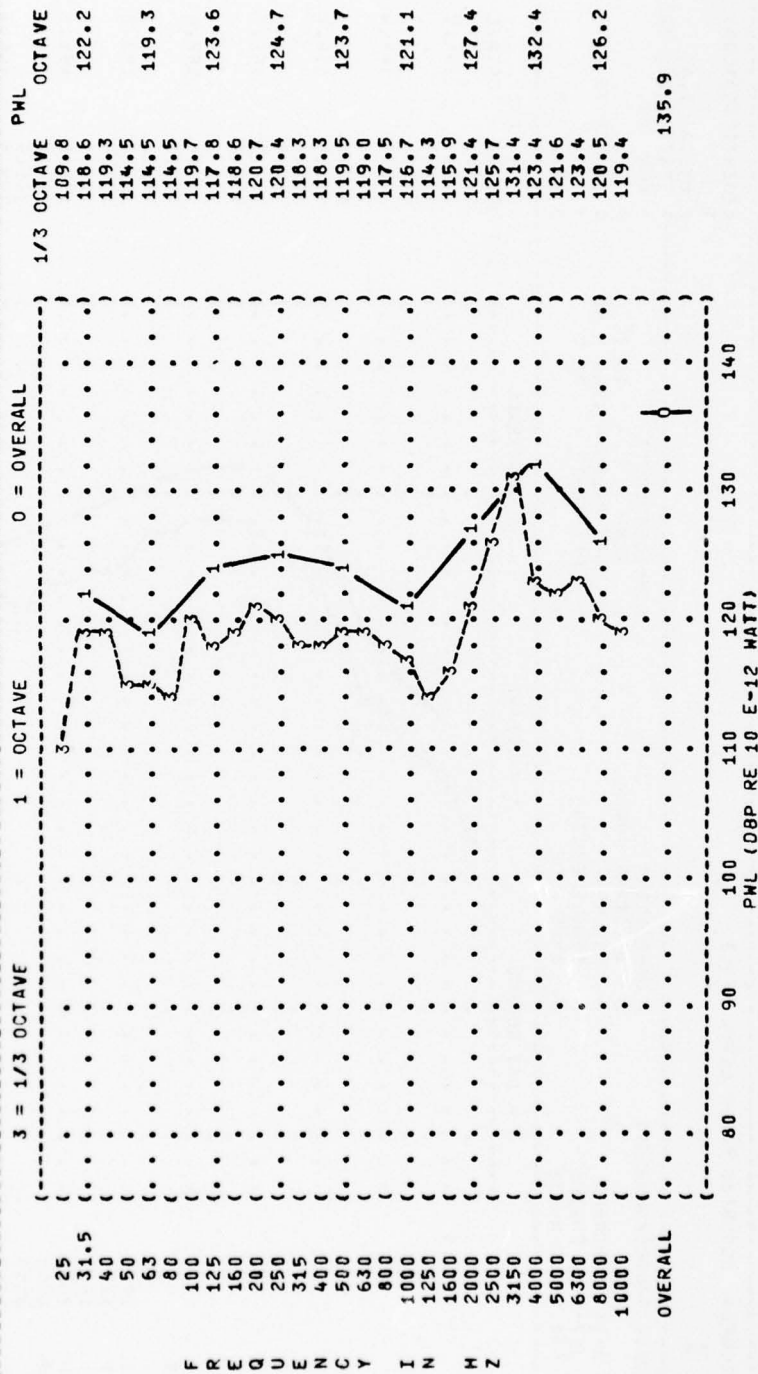


FIGURE: ACOUSTIC POWER LEVEL (PWL)

3

IDENTIFICATION:

OMEGA 1.4

TEST 75-002-003

RUN 05

05 MAY 75

PAGE 3

NOISE SOURCE/SUBJECT:

OPERATION:

75% RPM

BOTH ENGINES

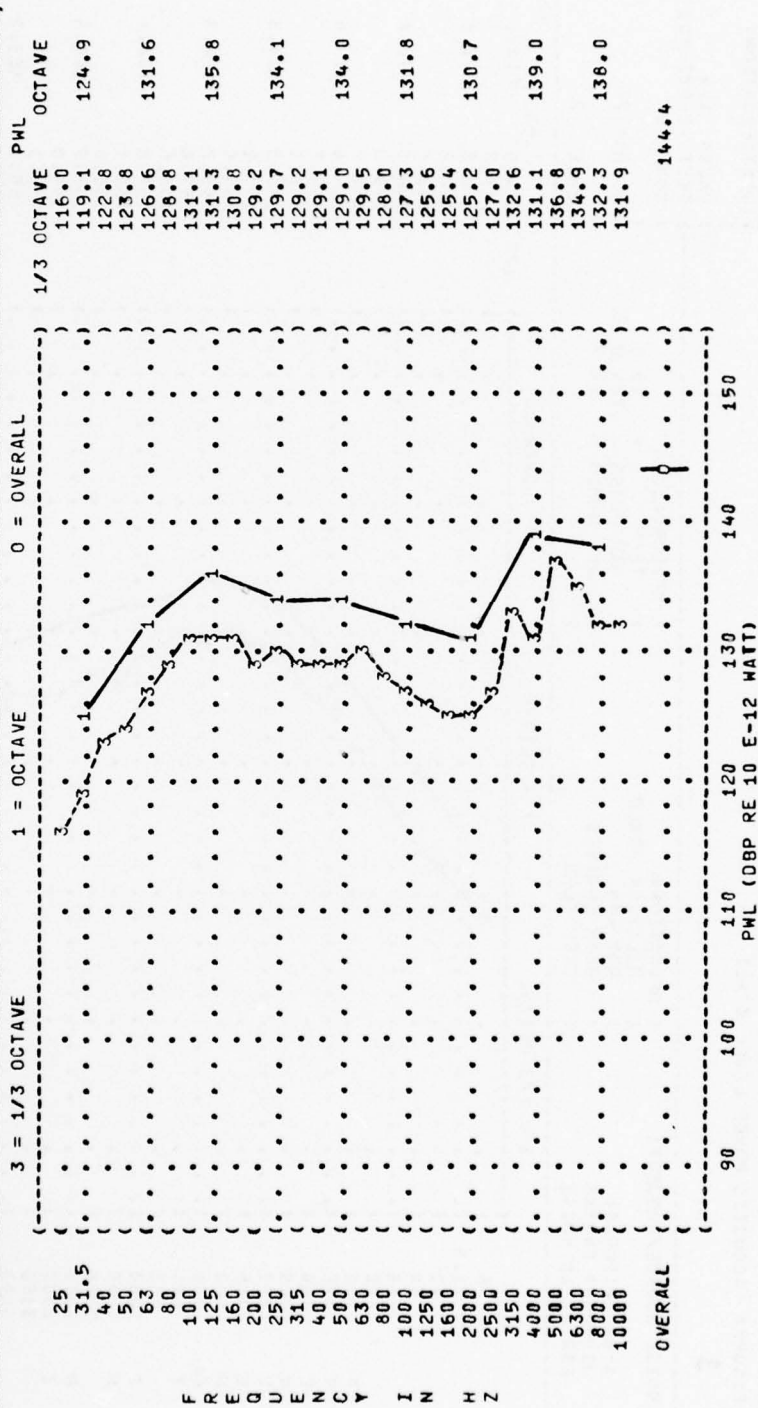
FREE FLOW

METEOROLOGY:

TEMP = 15 C

BAR PRESS = .764 M HG

REL HUMID = 78 %



(---) FIGURE: ACOUSTIC POWER LEVEL (PWL)  
 ( ) 3  
 ( ) IDENTIFICATION:  
 ( ) OMEGA 1.4  
 ( ) TEST 75-002-003  
 ( ) RUN 06  
 ( ) NOISE SOURCE/SUBJECT:  
 ( ) OPERATION:  
 ( ) MILITARY POWER  
 ( ) 99% RPM  
 ( ) BOTH ENGINES  
 ( ) FREE FLOW  
 ( ) METEOROLOGY:  
 ( ) TEMP = 15 C  
 ( ) BAR PRESS = .764 M HG  
 ( ) REL HUMID = 78 %  
 ( ) PAGE 3

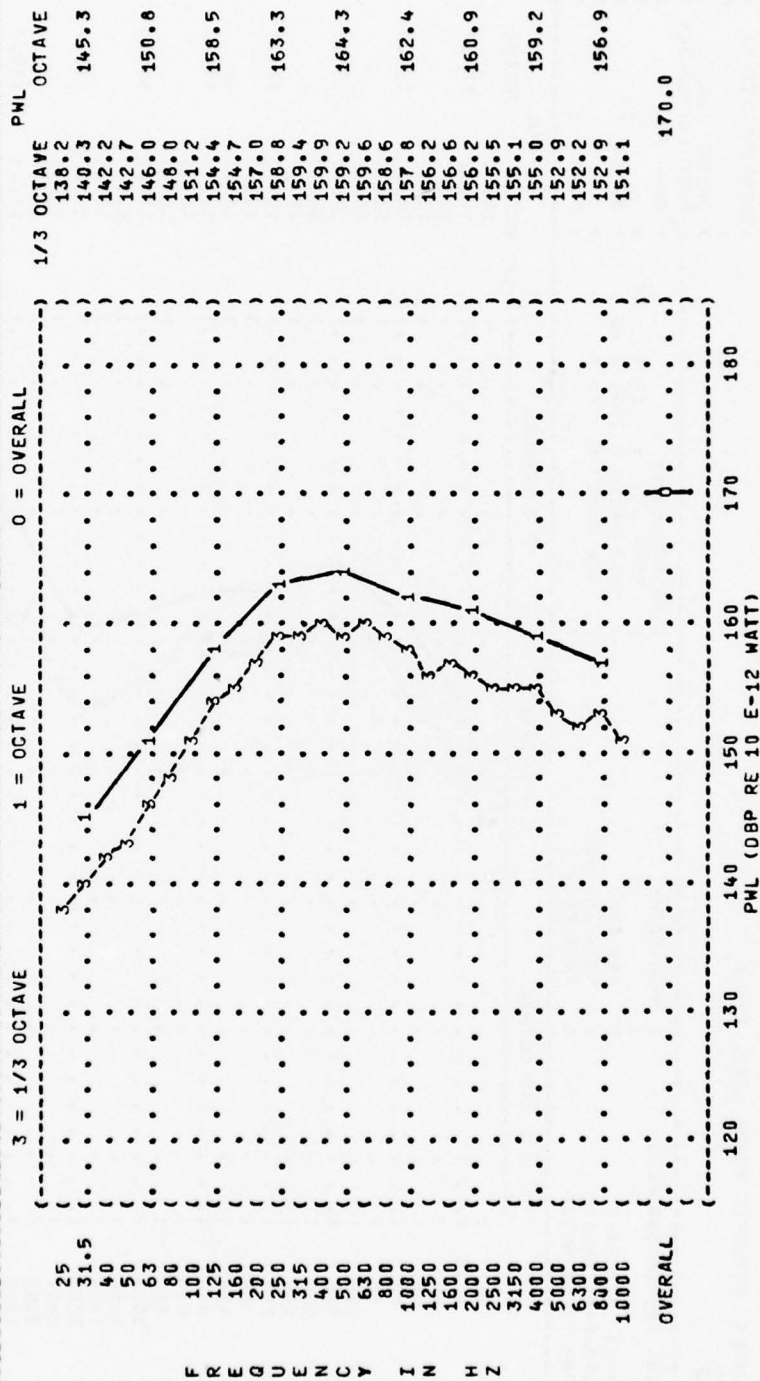


TABLE: DIRECTIVITY INDEX (DB)										IDENTIFICATION:									
3										OMEGA 1.4									
										TEST 75-002-003									
NOISE SOURCE/SUBJECT:										RUN 01									
( A-6A AIRCRAFT										METEOROLOGY: = 15 C									
( J52-P-8A ENGINE										BAR PRESS = .764 M HG									
( FAR FIELD NOISE										REL HUMID = 78 %									
(										PAGE 4									
FREQ	0	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180
(HZ)																			
1/3 OCTAVE																			
25	-8	-8	-6	-6	-6	-7	-4	-2	-3	-2	-2	2	2	3	6	7	7	7	6
31.5	-5	-5	-4	-5	-4	-3	-2	-3	-1	-3	1	1	1	2	5	4	2	4	3
40	-3	-4	-4	-4	-3	-6	-4	-3	-4	-3	-2	0	0	2	4	3	2	2	4
50	-4	-3	-2	-4	-3	-5	-5	-4	-4	-4	-2	0	0	3	5	4	0	0	4
63	-3	-3	-1	-2	-4	-6	-3	-4	-4	-3	-1	1	2	4	5	1	-1	-1	5
80	-1	-0	1	-1	-2	-3	-2	-4	-4	-2	2	2	3	3	3	-2	-6	-6	1
100	-1	-0	0	-1	-1	-3	-3	-4	-4	-2	2	2	3	3	3	-1	-18	-18	-6
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160	-4	-4	-3	-3	-5	-5	-6	-6	-6	-4	-1	1	5	6	4	-2	-16	-12	-1
200	-3	-2	-3	-3	-4	-5	-6	-5	-5	-3	0	1	5	4	4	-1	-18	-14	-2
250	-0	-0	-2	-2	-5	-7	-8	-6	-7	-2	4	3	2	4	3	-1	-19	-18	-11
315	1	1	1	-1	-2	-3	-4	-5	-6	-2	4	3	3	2	-1	-1	-18	-18	-12
400	1	0	1	-1	-0	-4	-4	-4	-5	-2	3	4	4	2	-0	-3	-16	-19	-13
500	4	2	2	3	1	-2	-5	-4	-5	-2	2	2	3	1	-0	-5	-14	-19	-12
630	8	6	4	3	1	-4	-3	-5	-7	-3	1	2	3	-1	-1	-7	-17	-18	-11
800	8	5	6	4	2	-0	-1	-3	-5	-2	-1	2	2	0	-2	-8	-19	-18	-10
1000	9	9	9	5	2	1	-1	-2	-6	-3	-3	-3	-4	-3	-7	-9	-21	-19	-12
1250	9	10	11	4	4	-2	-3	-5	-9	-8	-6	-8	-9	-9	-12	-13	-26	-25	-19
1600	9	10	13	2	2	-2	-6	-8	-9	-8	-7	-10	-9	-14	-16	-17	-27	-28	-23
2000	10	12	13	3	0	-4	-10	-11	-12	-10	-12	-14	-15	-19	-21	-21	-31	-34	-25
3150	8	8	7	7	4	4	-3	-4	-8	-7	-4	-4	-5	-8	-12	-11	-24	-25	-19
4000	7	9	9	5	2	2	-3	-5	-8	-4	-1	-4	-4	-6	-11	-11	-24	-23	-18
5000	8	13	9	5	2	-0	-4	-7	-10	-6	-4	-5	-7	-10	-13	-14	-26	-26	-20
6300	8	9	9	5	3	2	-2	-4	-8	-4	-2	-3	-4	-8	-12	-12	-24	-24	-19
8000	7	8	7	4	0	1	-3	-3	-6	-1	2	2	0	-3	-8	-10	-22	-20	-14
OCTAVE																			
31.5	-6	-7	-5	-6	-5	-4	-3	-3	-2	-2	-1	1	2	3	4	4	2	3	4
63	-3	-3	-2	-3	-3	-6	-4	-4	-4	-3	-2	1	2	5	5	2	-2	-2	4
125	0	-0	0	-1	-2	-3	-3	-4	-4	-3	1	2	3	4	3	-2	-21	-19	-8
250	-2	-2	-2	-2	-5	-6	-6	-6	-6	-3	1	1	5	5	4	-2	-17	-14	-2
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2000	9	10	12	3	3	-2	-4	-6	-9	-7	-6	-9	-8	-10	-13	-14	-26	-26	-19
4000	10	12	12	3	1	-2	-8	-9	-11	-9	-8	-10	-11	-14	-17	-17	-29	-30	-23
8000	8	12	9	5	2	0	-3	-6	-9	-5	-3	-3	-5	-8	-12	-13	-25	-24	-19
OVERALL	8	10	10	3	1	-2	-6	-7	-8	-5	-3	-2	-1	-2	-2	-6	-11	-10	-7



TABLE: DIRECTIVITY INDEX (DB)																			
IDENTIFICATION:																			
3																			
NOISE SOURCE/SUBJECT:																			
A-6A AIRCRAFT																			
J52-P-8A ENGINE																			
FAR FIELD NOISE																			
OPERATION:																			
75% RPM																			
SINGLE ENGINE																			
FREE FLOW																			
METEOROLOGICAL:																			
TEMP = 15 C																			
BAR PRESS = .764 M HG																			
REL HUMID = 78 %																			
PAGE 4																			
FREQ (HZ)	0	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180
ANGLE (DEGREES)																			
1/3 OCTAVE																			
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31.5																			
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2000																			
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8000																			
OVERALL																			

TABLE: DIRECTIVITY INDEX (DB)																		
IDENTIFICATION:																		
3																		
NOISE SOURCE/SUBJECT:																		
( OPERATION: )																		
( MILITARY POWER )																		
( 99% RPM )																		
( SINGLE ENGINE )																		
( FREE FLOW )																		
METEOROLOGY:																		
TEMP = 15 C																		
BAR PRESS = .764 M HG																		
REL HUMID = 78 %																		
PAGE 4																		
OMEGA 1.4																		
TEST 75-002-003																		
RUN 03																		
05 MAY 75																		
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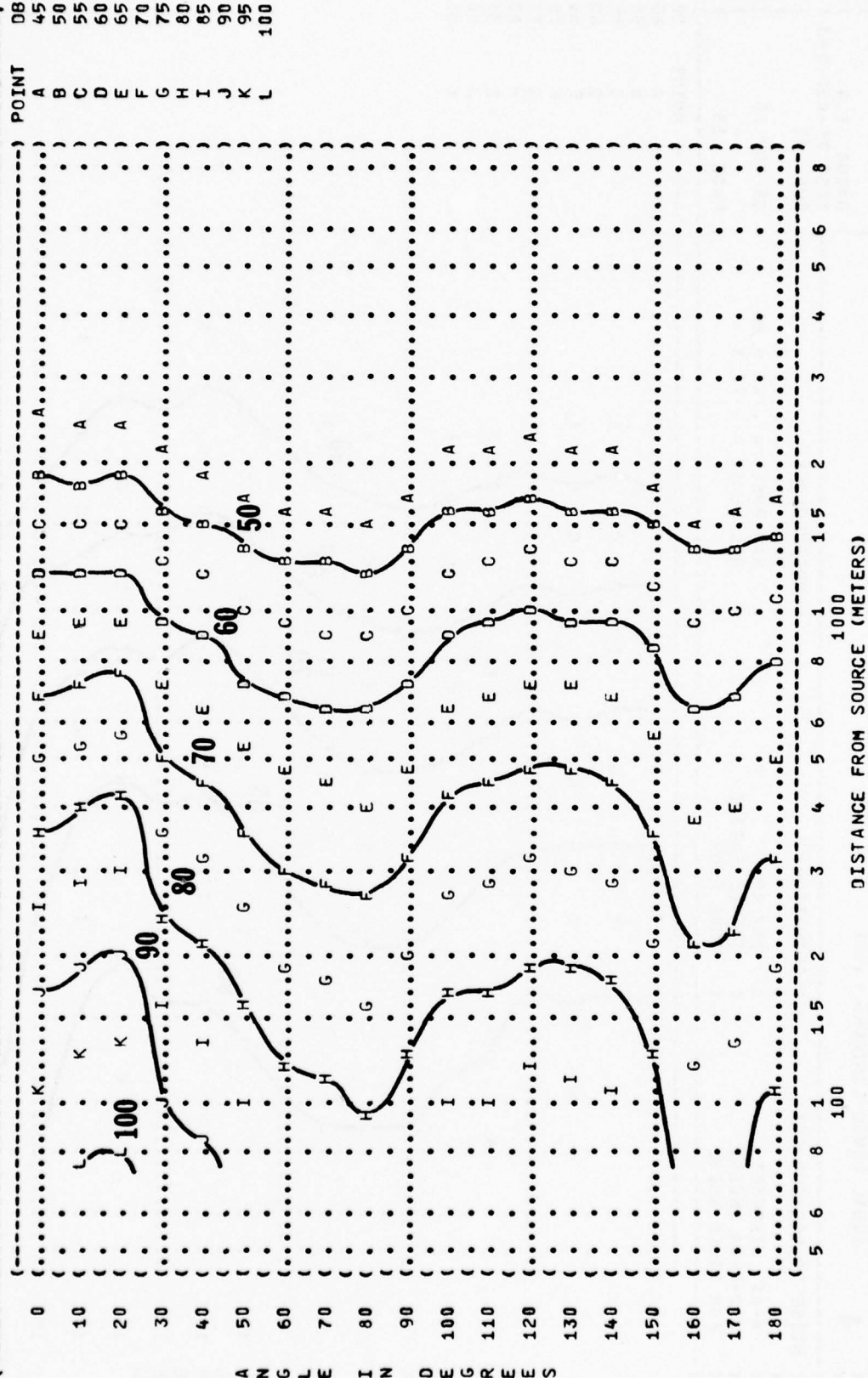
TABLE: DIRECTIVITY INDEX (DB)																
IDENTIFICATION:																
3																
NOISE SOURCE/SUBJECT:																
( OPERATIONS: ) METEOROLOGY: )																
( IDLE POWER ) TEMP = 15 C )																
( 60% RPM ) BAR PRESS = .764 M HG )																
( BOTH ENGINES ) REL HUMID = 78 % )																
( FREE FLOW ) )																
A-6A AIRCRAFT																
J52-P-8A ENGINE																
FAR FIELD NOISE																
PAGE 4																
FREQ (HZ)																
ANGLE (DEGREES)																
1/3 OCTAVE																
25	-1	-1	-0	2	-1	-2	-1	-0	-1	-1	-1	1	2	3	4	4
31.5	-8	-6	-4	-4	-3	-1	-1	0	-3	-1	-0	2	3	3	3	0
40	-7	-5	-3	-2	-1	-1	-3	-3	-7	-4	-3	1	2	6	5	-0
50	-5	-5	-4	-3	-2	-3	-3	-2	-3	-2	-1	2	3	5	4	-2
63	-6	-6	-5	-4	-3	-2	-3	-2	-5	-3	0	2	5	5	3	-4
80	-4	-3	-3	-1	-2	-2	-1	-1	-4	-2	-0	1	4	5	2	-6
100	-3	-1	-1	-1	-1	-1	-0	-1	-4	-2	2	1	2	3	3	-2
125	-3	-2	-1	-1	-1	-1	-1	-1	-4	-2	1	2	2	4	3	-2
160	-1	-0	-2	0	-2	-2	-3	-5	-5	-2	1	4	4	5	3	-3
200	-5	-5	-4	-2	-4	-4	-4	-4	-5	-3	0	1	4	5	5	-2
250	-5	-4	-4	-2	-4	-4	-5	-4	-4	-4	0	4	4	5	5	-2
315	-3	-2	-2	-2	-6	-6	-6	-5	-3	-1	3	3	3	4	3	-2
400	-3	-1	-1	-2	-2	-2	-6	-5	-2	-2	3	4	3	3	3	-1
500	-2	-1	-1	-1	-2	-2	-5	-5	-3	-2	3	4	3	3	-1	-3
630	1	1	1	1	-1	-2	-5	-5	-3	-1	3	3	3	3	-2	-4
800	7	5	2	2	-0	-1	-4	-3	-3	-2	2	2	2	4	1	-2
1000	7	5	3	3	1	0	-2	-3	-3	-2	1	2	2	-5	-7	-20
1250	8	7	2	3	3	1	-2	-3	-3	-3	1	2	2	-6	-8	-17
1600	10	9	6	6	3	0	-1	-3	-5	-3	-2	-2	-2	-7	-8	-20
2000	9	11	8	5	6	-2	-1	-4	-7	-7	-6	-6	-9	-11	-12	-23
2500	9	10	12	2	3	1	-4	-8	-9	-9	-11	-12	-12	-17	-27	-29
3150	9	13	11	2	3	-0	-6	-8	-10	-11	-9	-15	-15	-19	-20	-30
4000	7	10	5	5	4	4	-2	-4	-5	-3	0	-3	-3	-6	-10	-11
5000	6	10	6	5	4	1	-3	-6	-6	-3	0	-3	-5	-9	-10	-23
6300	7	12	7	6	4	0	-3	-7	-8	-5	-2	-5	-8	-11	-12	-22
8000	6	9	5	4	3	2	-1	-5	-5	-4	0	1	-3	-9	-11	-21
10000	4	7	3	1	-2	-5	-7	-4	-4	-1	5	-0	-2	-7	-10	-20
OCTAVE																
31.5	-7	-5	-3	-2	-2	-1	-1	-1	-5	-3	-2	-1	1	2	5	4
63	-5	-5	-4	-3	-3	-2	-2	-2	-4	-2	-0	-1	2	4	5	3
125	-2	-1	-1	-0	-1	-1	-1	-2	-4	-2	1	1	2	4	3	-2
250	-4	-4	-3	-2	-4	-5	-4	-5	-3	-3	1	1	4	4	4	-2
500	-1	-1	-0	-1	-2	-2	-5	-5	-3	-1	3	4	3	3	-1	-3
1000	7	6	2	2	0	-0	-3	-3	-3	-2	1	2	3	0	-4	-6
2000	9	11	11	4	4	0	-3	-6	-7	-6	-7	-8	-9	-9	-13	-14
4000	9	12	11	3	3	1	-5	-7	-8	-9	-6	-10	-11	-15	-16	-27
8000	7	11	7	5	3	1	-3	-6	-6	-4	-0	-0	-3	-6	-10	-12
OVERALL																
	7	10	8	2	2	-0	-4	-5	-6	-5	-2	-1	-1	-1	-4	-11
																-9
																-7

TABLE: DIRECTIVITY INDEX (DB)																
3																
IDENTIFICATION:																
OMEGA 1.4																
TEST 75-002-003																
RUN 05																
05 MAY 75																
PAGE 4																
NOISE SOURCE/SUBJECT:																
( OPERATION:																
( 75% RPM																
( BOTH ENGINES																
( FREE FLOW																
METEOROLOGY:																
TEMP = 15 C																
BAR PRESS = .764 M HG																
REL HUMID = 78 %																
ANGLE (DEGREES)																
FREQ	0	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150
(HZ)																
1/3 OCTAVE																
25	-7	-6	-7	-6	-8	-7	-6	-5	-6	-3	-0	-1	0	4	5	7
31.5	-9	-8	-7	-7	-6	-6	-4	-6	-6	-3	-3	-1	0	4	4	7
40	-9	-9	-10	-9	-8	-7	-6	-5	-5	-3	-2	-0	1	5	6	7
50	-11	-9	-9	-9	-8	-7	-6	-7	-7	-4	-4	-1	3	5	6	8
63	-11	-11	-10	-11	-10	-9	-9	-8	-9	-4	-2	-1	2	6	7	6
80	-13	-12	-13	-11	-11	-11	-11	-9	-9	-4	-2	0	3	6	6	6
100	-13	-12	-11	-11	-11	-12	-10	-9	-9	-4	-1	1	4	6	5	4
125	-11	-11	-11	-11	-10	-10	-10	-9	-7	-2	0	3	5	6	4	1
160	-7	-7	-6	-5	-5	-5	-5	-5	-4	-1	1	4	4	5	1	-6
200	-8	-6	-5	-4	-5	-5	-8	-5	-4	-1	1	5	5	4	-1	-9
250	-8	-7	-6	-6	-7	-9	-8	-6	-4	-1	2	5	4	4	-3	-13
315	-9	-8	-7	-6	-8	-7	-8	-5	-3	-0	3	5	4	4	-5	-16
400	-8	-7	-6	-6	-8	-7	-6	-5	-3	-0	3	5	4	2	-7	-17
500	-7	-6	-6	-6	-6	-5	-6	-5	-4	-0	4	5	4	0	-8	-18
630	-6	-5	-4	-3	-4	-4	-7	-5	-3	0	4	5	4	-0	-8	-18
800	-3	-3	-3	-2	-3	-3	-4	-4	-3	1	4	5	4	-0	-8	-18
1000	-3	-1	-1	-1	-2	-3	-4	-4	-3	1	3	5	2	-1	-9	-17
1250	2	2	1	1	0	-1	-3	-3	-2	0	3	4	0	-2	-10	-17
1600	4	5	3	3	1	-1	-2	-3	-2	-0	2	3	0	-3	-11	-17
2000	5	6	3	3	1	1	-1	-1	-2	-1	2	2	-1	-4	-11	-17
2500	5	7	4	4	2	1	-1	-1	-3	-1	2	0	-3	-6	-13	-20
3150	3	9	3	6	3	4	-0	1	-5	-3	-2	-4	-6	-9	-15	-24
4000	6	9	8	5	3	1	-2	-3	-5	-2	-0	-3	-7	-11	-16	-23
5000	8	11	9	6	3	0	-4	-5	-9	-8	-7	-10	-12	-16	-24	-29
6300	3	7	6	5	6	5	0	-1	-7	-5	-4	-6	-9	-13	-22	-26
8000	4	7	5	5	4	4	1	-0	-5	-2	-1	-3	-7	-11	-21	-23
10000	7	8	7	5	3	3	-1	-0	-3	-2	-1	-4	-9	-13	-22	-23
OCTAVE																
31.5	-9	-8	-8	-8	-8	-7	-6	-6	-6	-4	-2	-1	1	5	6	7
63	-12	-11	-11	-11	-10	-10	-10	-8	-9	-4	-2	-0	3	6	6	6
125	-10	-9	-8	-8	-8	-7	-7	-8	-7	-3	0	2	4	4	4	2
250	-8	-7	-6	-5	-7	-7	-8	-5	-4	-1	2	5	4	4	-1	-9
500	-7	-6	-5	-5	-5	-5	-6	-5	-3	-0	3	5	4	2	-6	-17
1000	-1	-1	-1	-0	-1	-2	-3	-4	-3	1	3	5	3	-1	-9	-17
2000	5	6	4	4	2	1	-1	-1	-2	-1	2	2	-1	-4	-12	-18
4000	7	11	8	6	3	2	-2	-2	-7	-5	-3	-6	-9	-12	-18	-26
8000	4	7	6	5	5	4	0	-1	-6	-4	-2	-5	-8	-12	-22	-25
OVERALL	3	6	4	2	1	-0	-4	-4	-5	-2	0	2	2	2	-0	-2



TABLE: DIRECTIVITY INDEX (DB)										IDENTIFICATION:									
3										OMEGA 1.4									
NOISE SOURCE/SUBJECT:										TEST 75-002-003									
( A-6A AIRCRAFT )										) RUN 06									
( J52-P-8A ENGINE )										) 05 MAY 75									
( FAR FIELD NOISE )										) PAGE 4									
FREQ (HZ)										ANGLE (DEGREES)									
0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170 180																			
1/3 OCTAVE																			
25																			
31.5																			
40																			
50																			
63																			
80																			
100																			
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3150																			
4000																			
5000																			
6300																			
8000																			
10000																			
OCTAVE																			
31.5																			
63																			
125																			
250																			
500																			
1000																			
2000																			
4000																			
8000																			
OVERALL																			

FIGURE: OVERALL SOUND PRESSURE LEVEL (OASPL)  
 4  
 IDENTIFICATION:  
 OMEGA 1.4  
 TEST 75-002-003  
 RUN 01  
 NOISE SOURCE/SUBJECT:  
 OPERATION:  
 IDLE POWER  
 60% RPM  
 SINGLE ENGINE  
 FREE FLOW  
 METEOROLOGY:  
 TEMP = 15 C  
 BAR PRESS = .760 M HG  
 REL HUMID = 70 %  
 05 MAY 75  
 PAGE 13



### IDENTIFICATIONS

**( OPERATION:**

) METEOROLOGY:  
 ) TEMP  
 ) BAR PRESS  
 ) REL HUMID

BAR PRESS = .760 M HG  
REL HUMID = 70 %

**PAGE 13**

**INT**



DISTANCE FROM SOURCE (METERS)

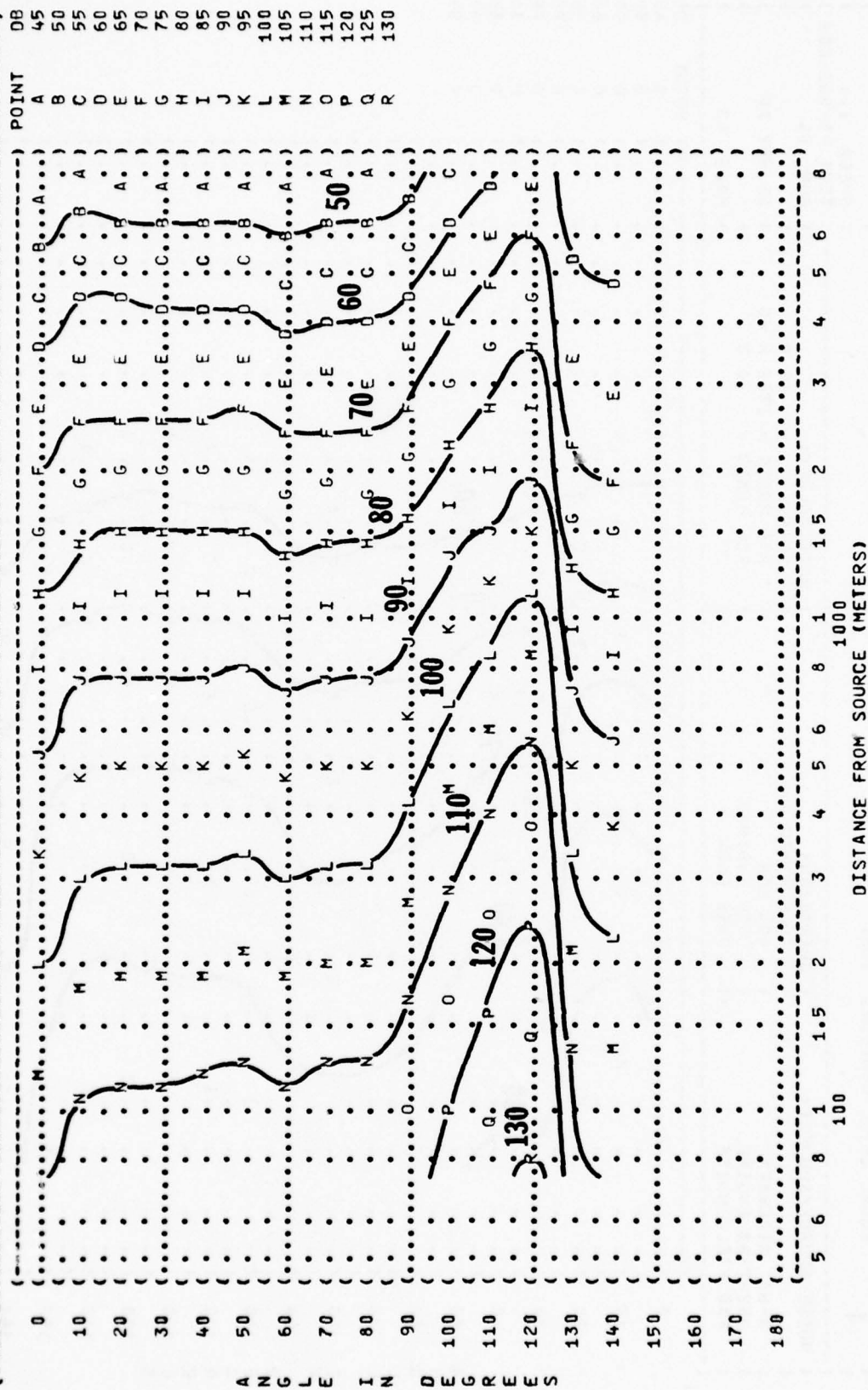
FIGURE: OVERALL SOUND PRESSURE LEVEL (OASPL)  
4 EQUAL LEVEL CONTOURS (DB)

NOISE SOURCE/SUBJECT:  
( A-6A AIRCRAFT  
( J52-P-8A ENGINE  
( FAR FIELD NOISE

OPERATION:  
( MILITARY POWER  
( 99% RPM  
( SINGLE ENGINE  
( FREE FLOW

METEOROLOGY:  
( TEMP = 15 C  
( BAR PRESS = .760 M HG  
( REL HUMID = 70 %

IDENTIFICATION:  
( OMEGA 1.4  
( TEST 75-002-003  
( RUN 03  
( 05 MAY 75  
( PAGE 13







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(-----)
( ) FIGURE: OVERALL SOUND PRESSURE LEVEL (OASPL) ) IDENTIFICATION: )
( )      4      EQUAL LEVEL CONTOURS   (DB)    )              )
( )                                     )              )
( )                                     ) OMEGA 1.4 )
( )                                     ) TEST 75-002-003 )
( ) NOISE SOURCE/SUBJECT:           ) RUN 05 )
( )                               ) METEOROLOGY: )
( )                               ) TEMP = 15 C )
( ) A-6A AIRCRAFT                   ) BAR PRESS = .760 M HG )
( ) J52-P-8A ENGINE                 ) REL HUMID = 70 % )
( ) FAR FIELD NOISE                ) FREE FLOW )
( )                               ) PAGE 13 )
(-----)
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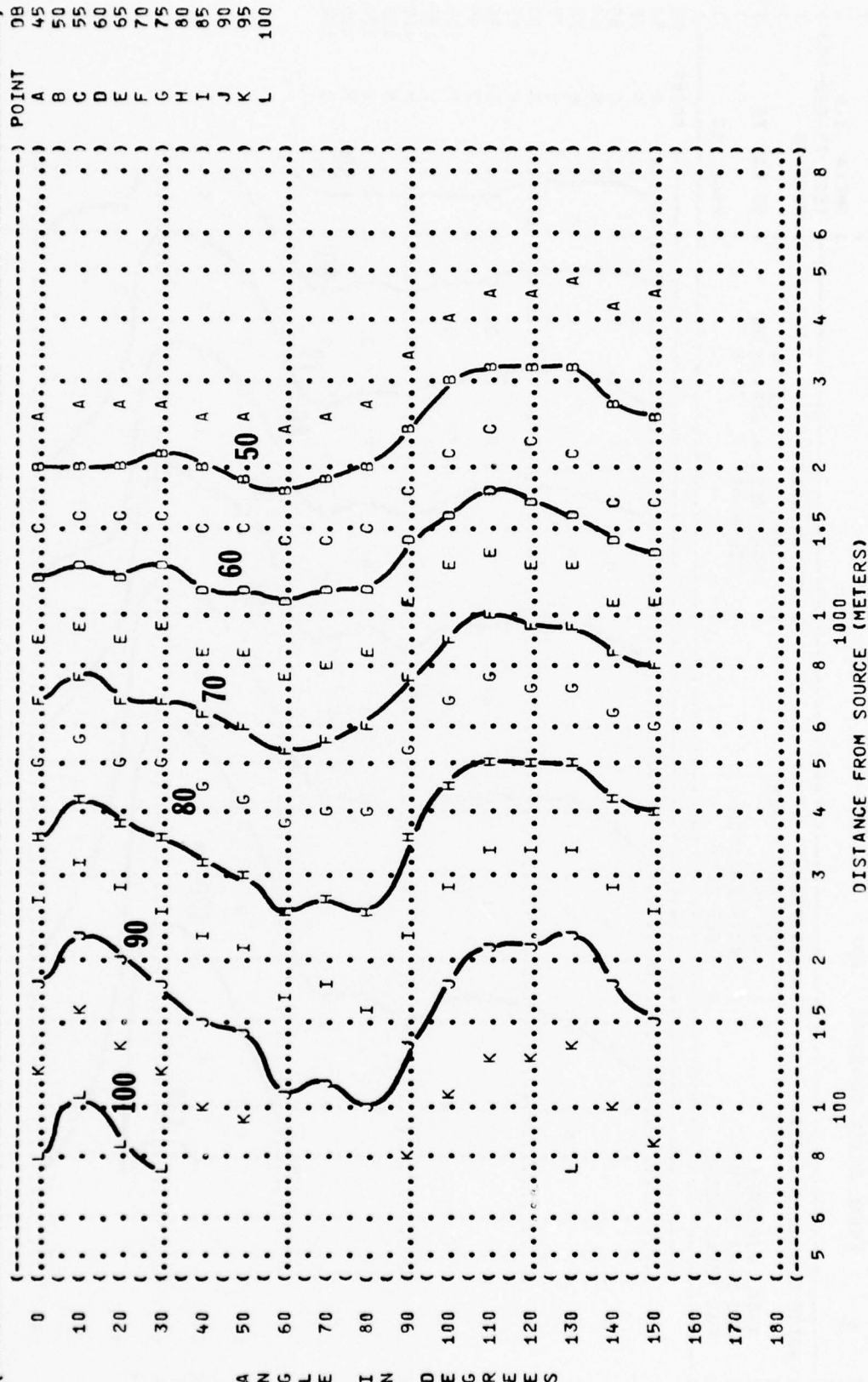




FIGURE: C-WEIGHTED OVERALL SOUND LEVEL (OASLC)  
 5  
 EQUAL LEVEL CONTOURS (DNC)

NOISE SOURCE/SUBJECT:

( OPERATION: ( IDLE POWER  
 ( ( 60% RPM  
 ( ( SINGLE ENGINE  
 ( ( FREE FLOW

METEOROLOGY:

( TEMP = 15 C  
 ( BAR PRESS = .760 M HG  
 ( REL HUMID = 70 %  
 ( )

IDENTIFICATION:

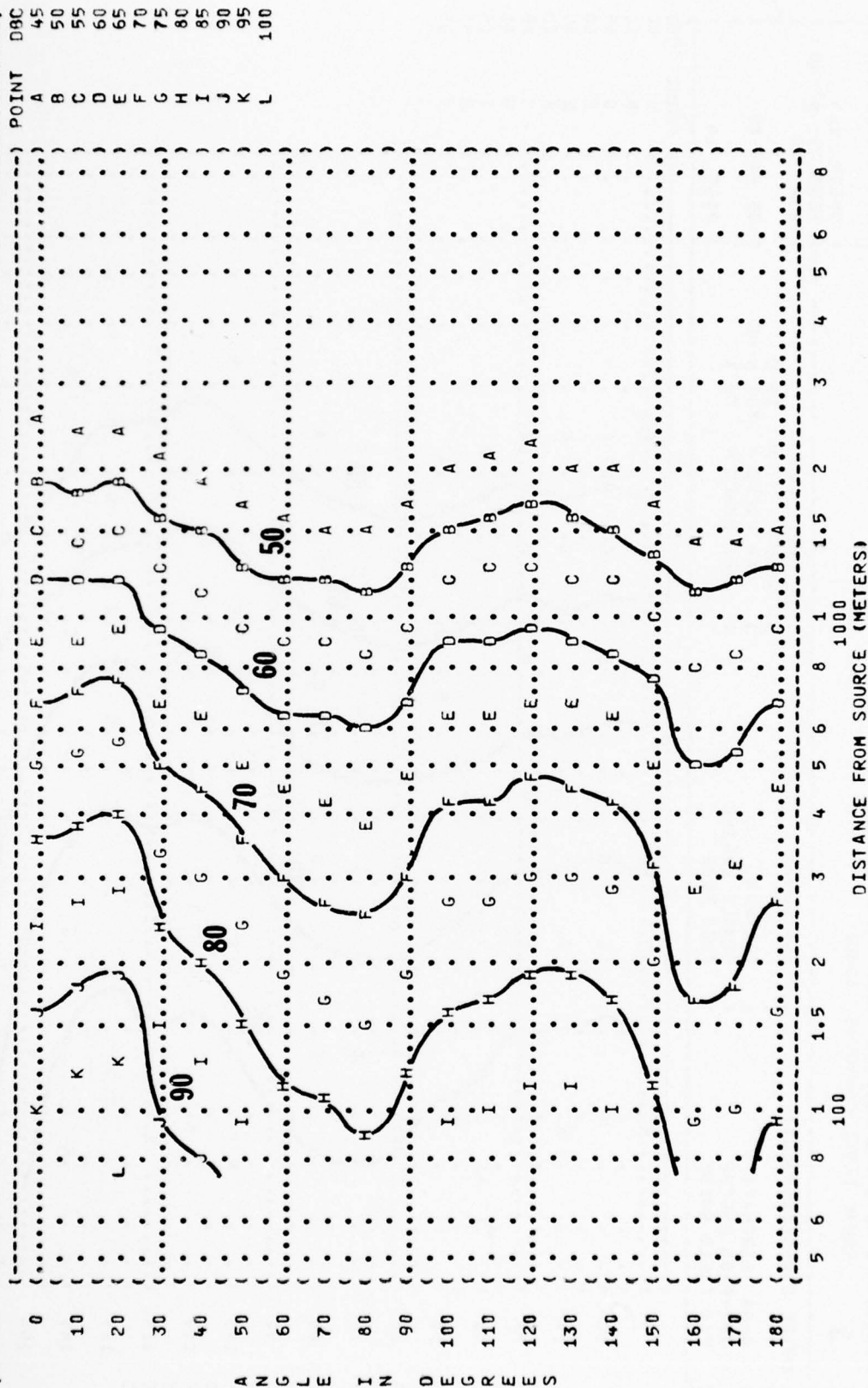
OMEGA 1.4

TEST 75-002-003

RUN 01

05 MAY 75

PAGE 14





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(-----)
( FIGURE: C-WEIGHTED OVERALL SOUND LEVEL {OASLC} ) IDENTIFICATION: )
(      5      EQUAL LEVEL CONTOURS   (DBC) ) )
( ) )
( ) OMEGA 1.4 )
( ) TEST 75-002-003 )
( ) RUN 02 )
( ) )
( ) METEOROLOGY: )
( ) TEMP = 15 C )
( ) BAR PRESS = .760 M HG )
( ) SINGLE ENGINE ) REL HUMID = 70 % )
( ) FREE FLOW ) )
( ) PAGE 14 )
(-----)
```

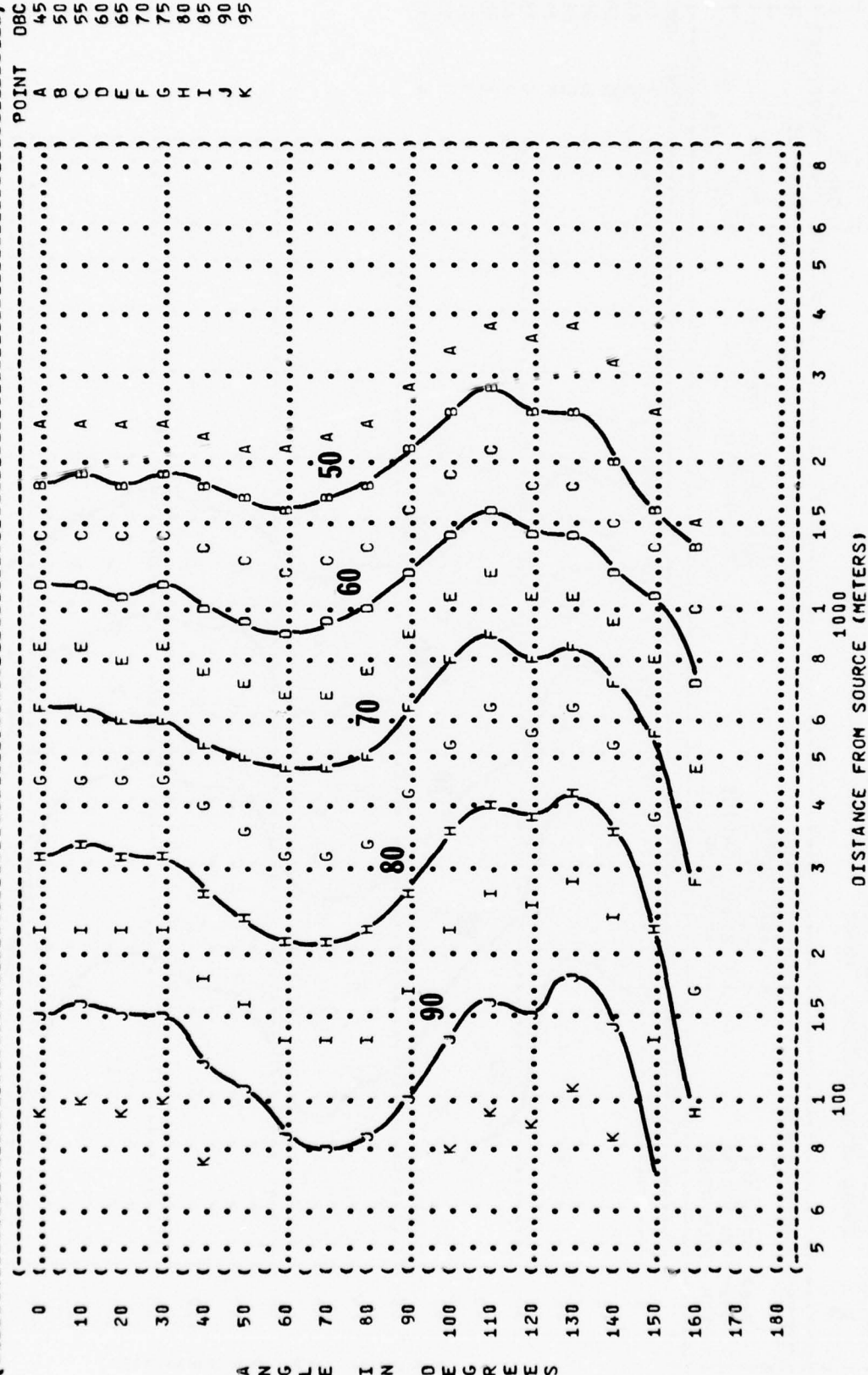
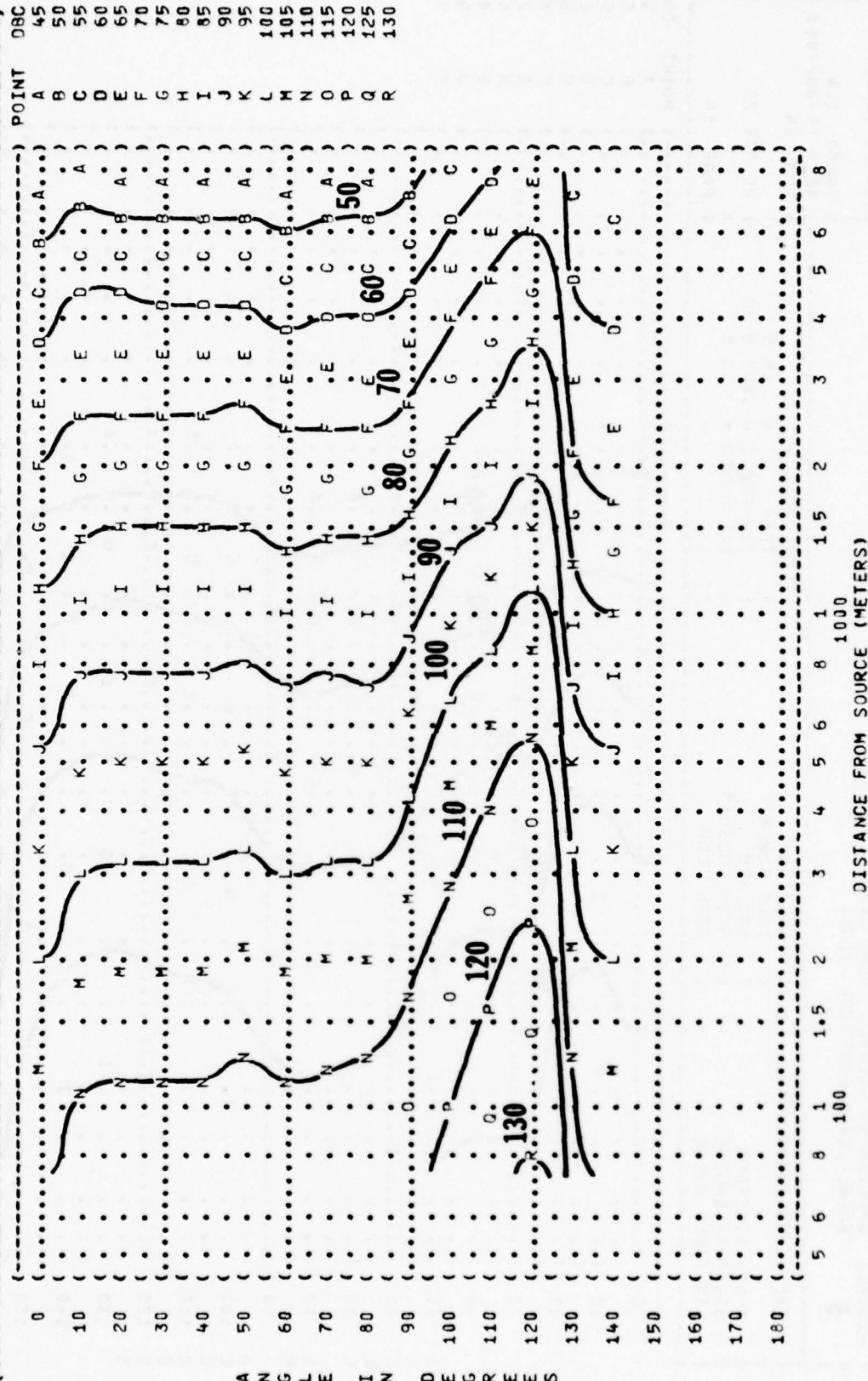
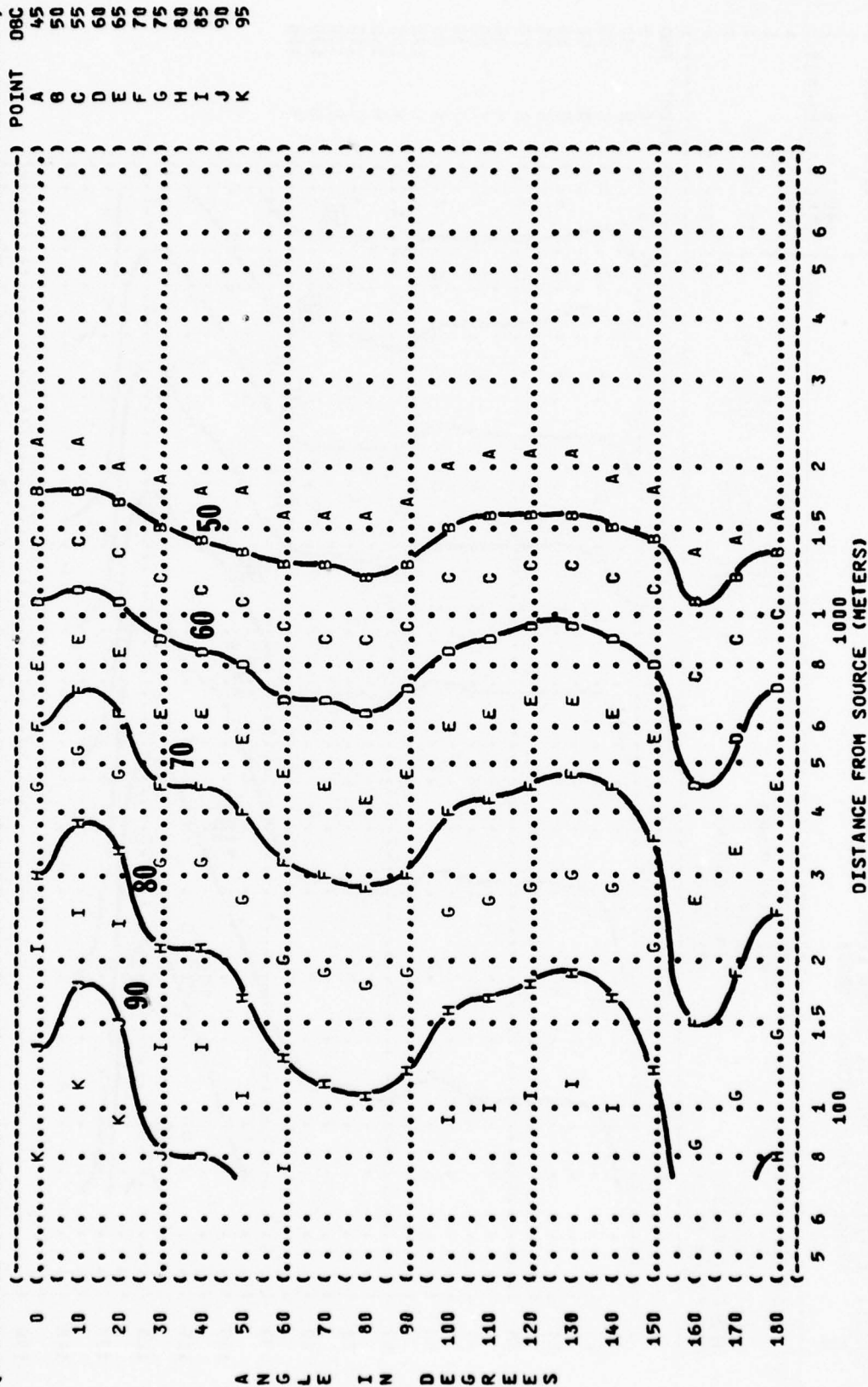


FIGURE: C-WEIGHTED OVERALL SOUND LEVEL (OASLC)  
 5  
 IDENTIFICATION:  
 OMEGA 1.4  
 TEST 75-002-003  
 RUN 03  
 METEOROLOGY:  
 TEMP = 15 C  
 BAR PRESS = .760 M HG  
 REL HUMID = 70 %  
 OPERATION:  
 MILITARY POWER  
 99% RPM  
 SINGLE ENGINE  
 FREE FLOW  
 NOISE SOURCE/SUBJECT:  
 A-6A AIRCRAFT  
 J52-P-8A ENGINE  
 FAR FIELD NOISE  
 05 MAY 75  
 PAGE 14



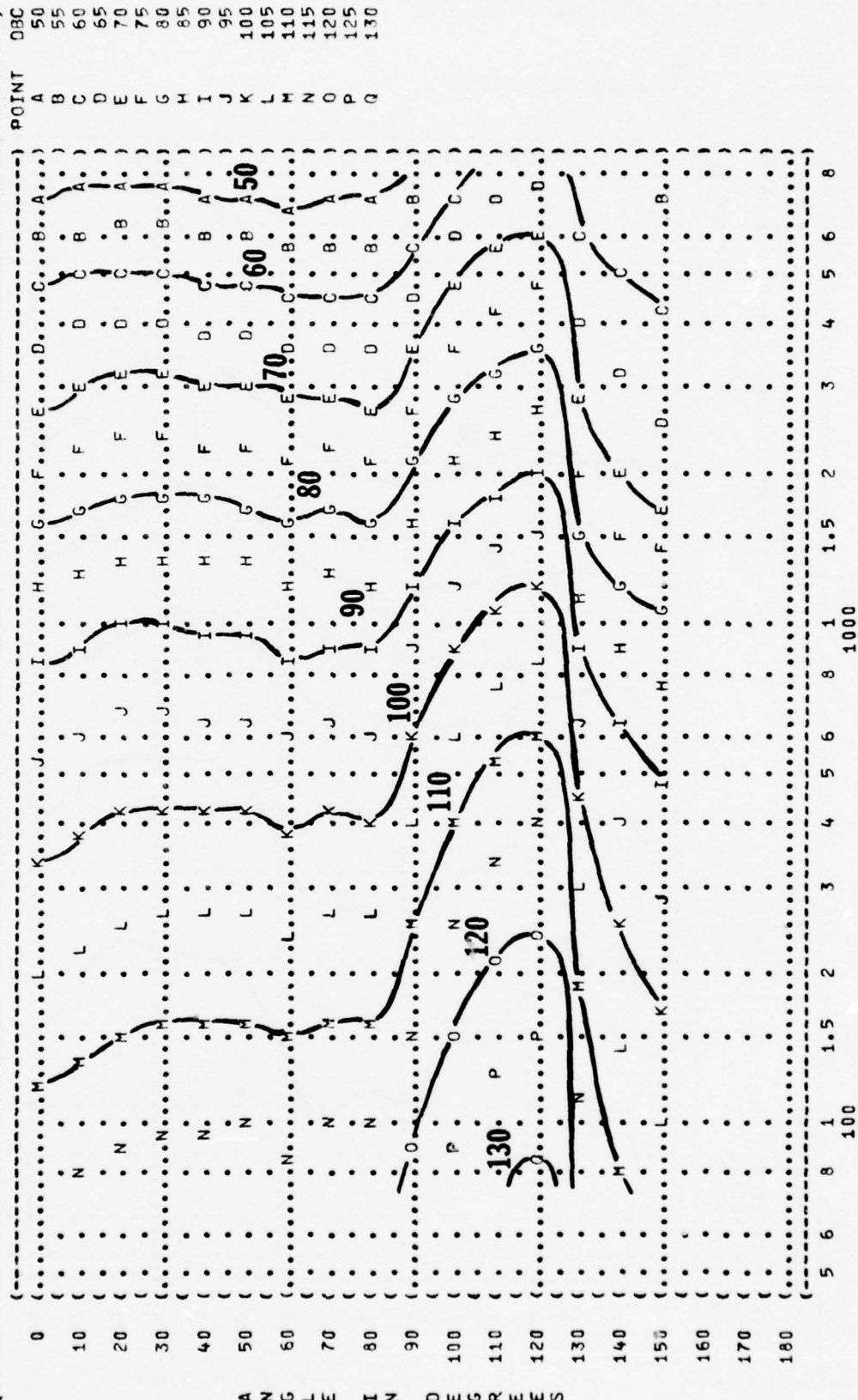
( FIGURE: C-WEIGHTED OVERALL SOUND LEVEL (OASLC)  
 ( 5 EQUAL LEVEL CONTOURS (DBC)  
 ( ) IDENTIFICATION:  
 ( ) OMEGA 1.4  
 ( ) TEST 75-002-003  
 ( ) RUN 04  
 ( ) METEOROLOGY:  
 ( ) TEMP = 15 C  
 ( ) BAR PRESS = .760 M HG  
 ( ) REL HUMID = 70 %  
 ( ) OPERATION:  
 ( ) IDLE POWER  
 ( ) 60% RPM  
 ( ) BOTH ENGINES  
 ( ) FREE FLOW  
 ( NOISE SOURCE/SUBJECT:  
 ( A-6A AIRCRAFT  
 ( J52-P-8A ENGINE  
 ( FAR FIELD NOISE  
 ( ) PAGE 14



ANGLE IN DEGREES



FIGURE: G-WEIGHTED OVERALL SOUND LEVEL (OASLC)  
 5  
 IDENTIFICATION:  
 OMEGA 1.4  
 TEST 75-002-003  
 RUN 06  
 METEOROLOGY:  
 TEMP = 15 C  
 BAR PRESS = .760 M HG  
 REL HUMID = 70 %  
 05 MAY 75  
 PAGE 14





IDENTIFICATION: )  
)

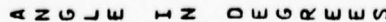
## OMEGA 1.4

## ● METEOROLOGY:

02 00 RUN

BAR PRESS = .760 M HG  
REL HUMID = 70 %

POINT	D8A
A	45
B	50
C	55
D	60
E	65
F	70
G	75
H	80
I	85
J	90
K	95









) IDENTIFICATION: )  
) )

1.

## 1) METEOROLOGY:

● RUN 04

TEMP = 15 C

BAR PRESS = .760 M HG

REL HUMID = 70 %

) PAGE 15



IDENTIFICATIONS:

(CBA)

**(X) OPERATION:**

RUN 05

75% RPM

HG  
M  
09

BOTH ENGINE

70 %

( ) FREE FLOW

**POINT**

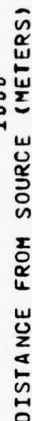


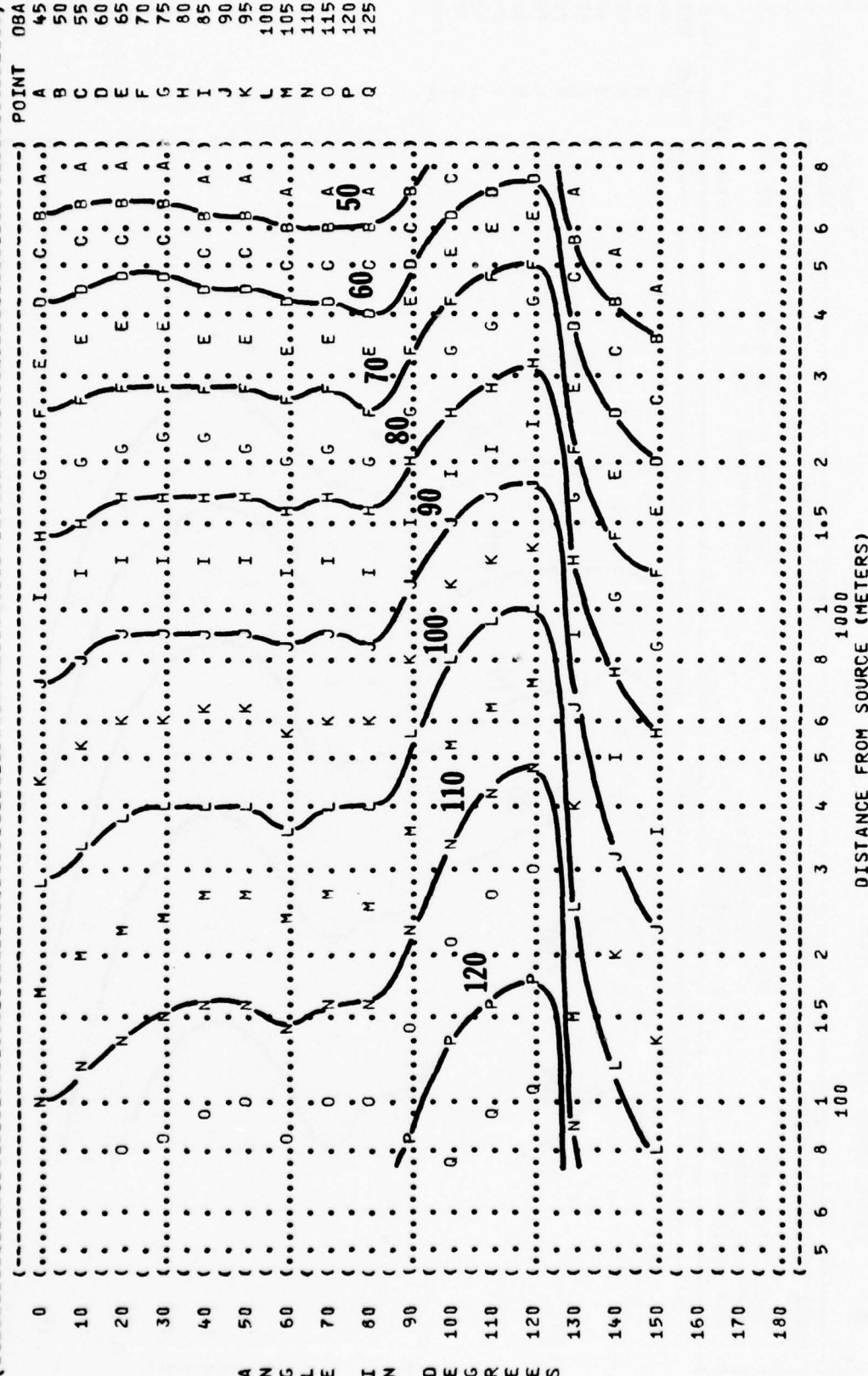
FIGURE: A-WEIGHTED OVERALL SOUND LEVEL {OASLA}  
C  
EQUAL LEVEL CONTOURS (DBA)

6

```

NOISE SOURCE/SUBJECT:
( OPERATION:
( MILITARY POWER
( 99% RPM
( BOTH ENGINES
( FREE FLOW
) METEOROLOGY:
) TEMP = 15 C
) BAR PRESS = .760 M HG
) REL HUMID = 70 %
)
) RUN 06
)
) 05 MAY 75
)
) PAGE 15

```



DISTANCE FROM SOURCE (METERS)



IDENTIFICATION:

OMEGA 1.4

### 1) METEOROLOGY:

81

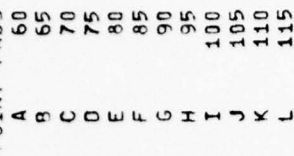
) TEMP

BAR PRESS = .760 M HG

d) REL HUMID = 70 %

PAGE 16

POINT	A	B	C	D	E	F	G	H	I	J	K	L
PNOB	60	65	70	75	80	85	90	95	100	105	110	115









( FIGURE: PERCEIVED NOISE LEVEL WITH SMOOTH TONE CORRECTION (PNLT)  
 ( 7  
 ( IDENTIFICATION:  
 ( )  
 ( ) OMEGA 1.4  
 ( ) TEST 75-002-003  
 ( ) RUN 04  
 ( )  
 ( NOISE SOURCE/SUBJECT: ( OPERATION: ) METEOROLOGY:  
 ( ( IDLE POWER ) TEMP = 15 C  
 ( ( 60% RPM ) BAR PRESS = .760 M HG  
 ( ( 80% ENGINES ) REL HUMID = 70 %  
 ( ( FREE FLOW ) )  
 ( ) PAGE 16  
 ( )

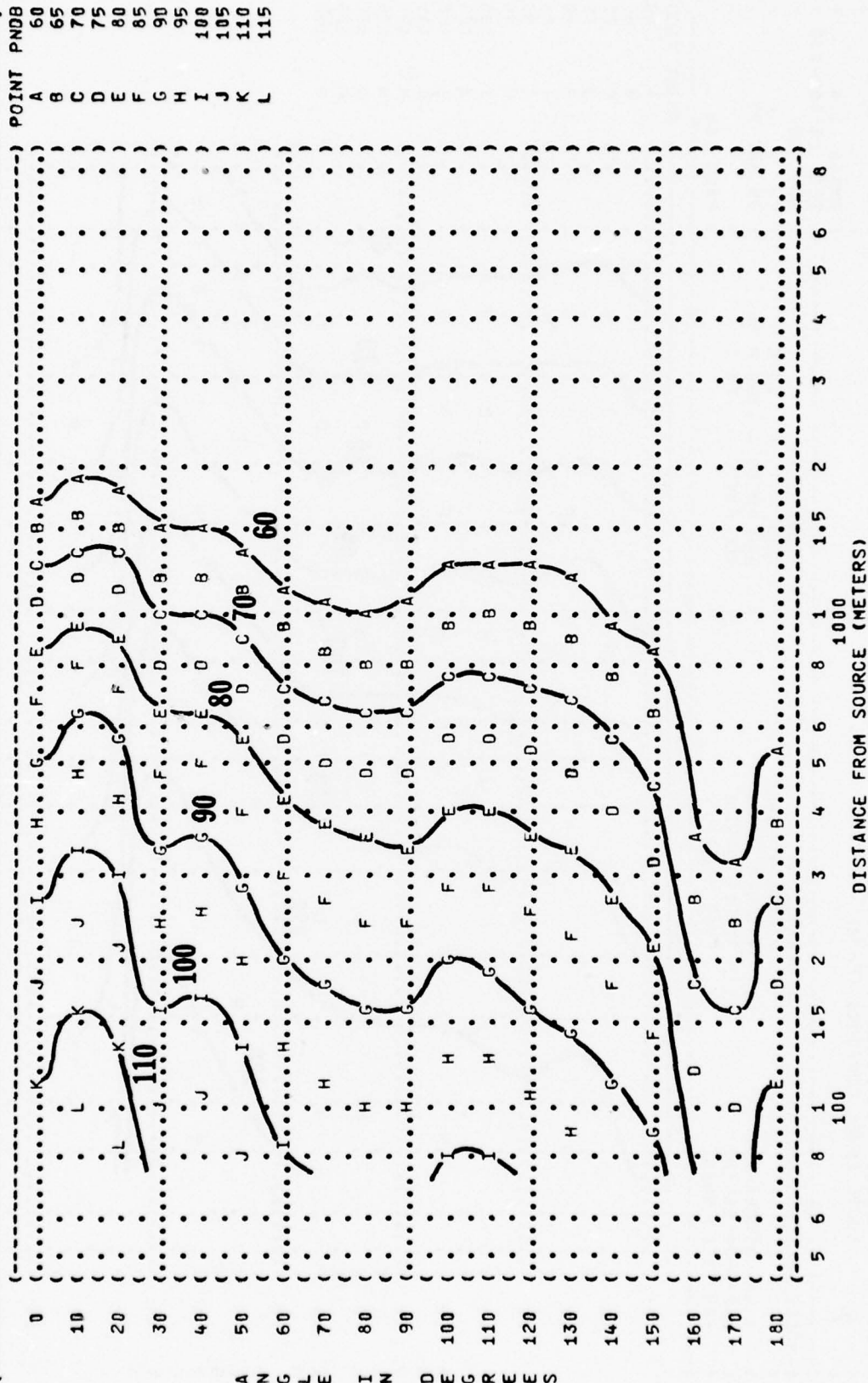




FIGURE 7: PERCEIVED NOISE LEVEL WITH SMOOTH TONE CORRECTION (PNLT) EQUAL LEVEL CONTOURS (PNDB)

**IDENTIFICATION:**

OMEGA 1.4

TEST 75-002-003

RUN 05

NOISE SOURCE/SUBJECT:

( OPERATION:

—

(	TEMP	=	15 C
(	BAR PRESS	=	.760 M HG
(	75% RPM		
(	90TH ENGINES		
(	REL HUMID	=	70 %

PAGE 16

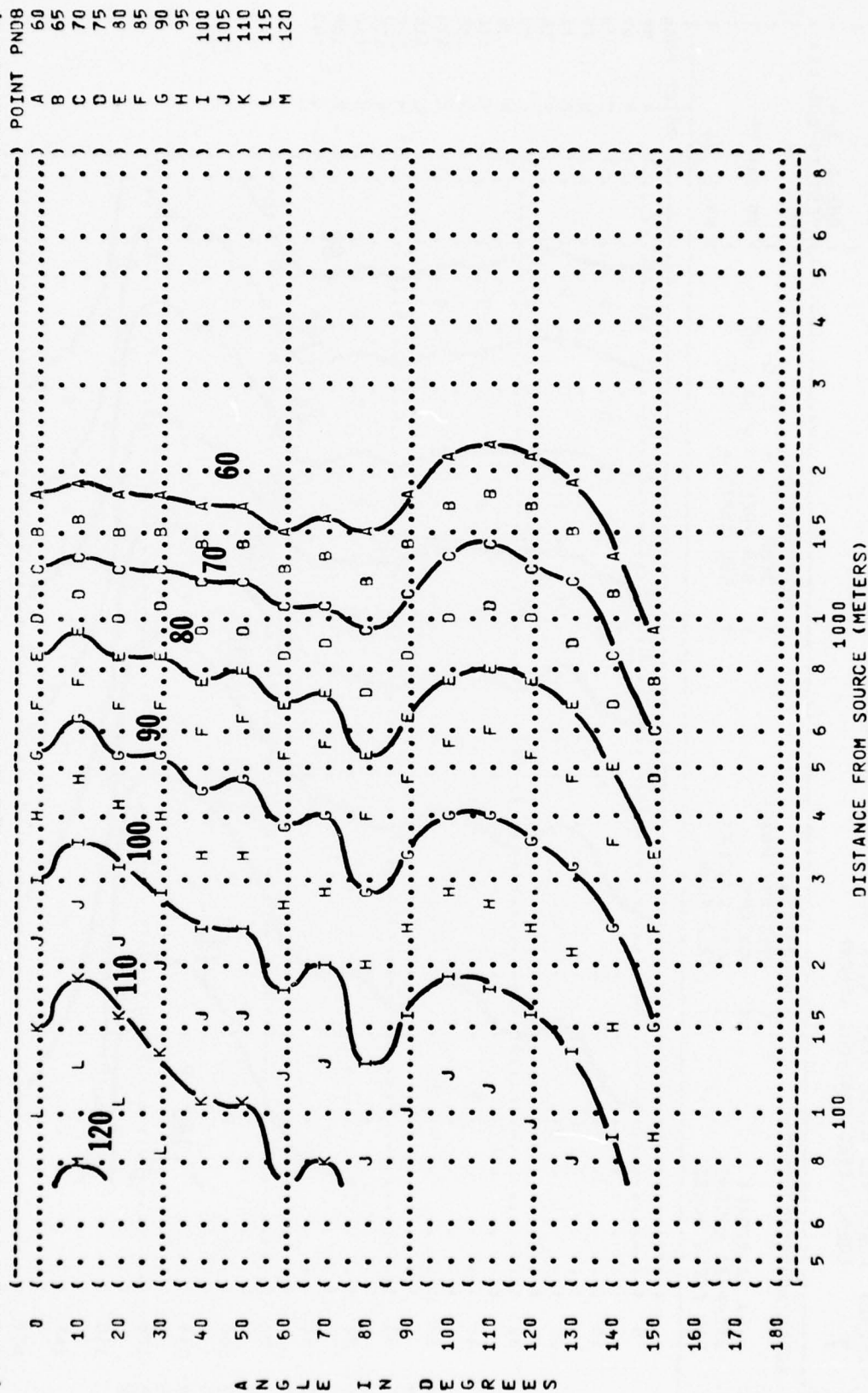
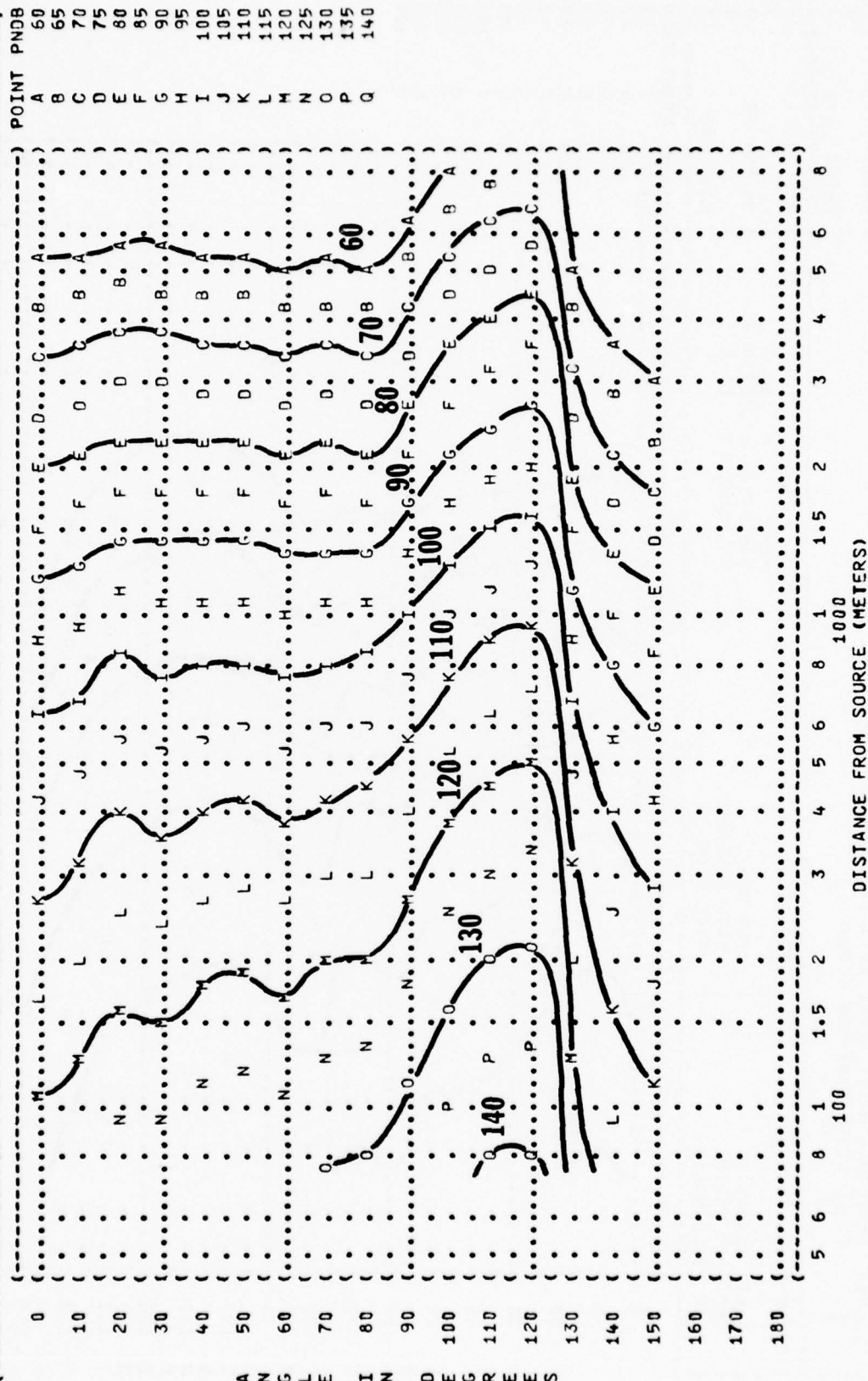
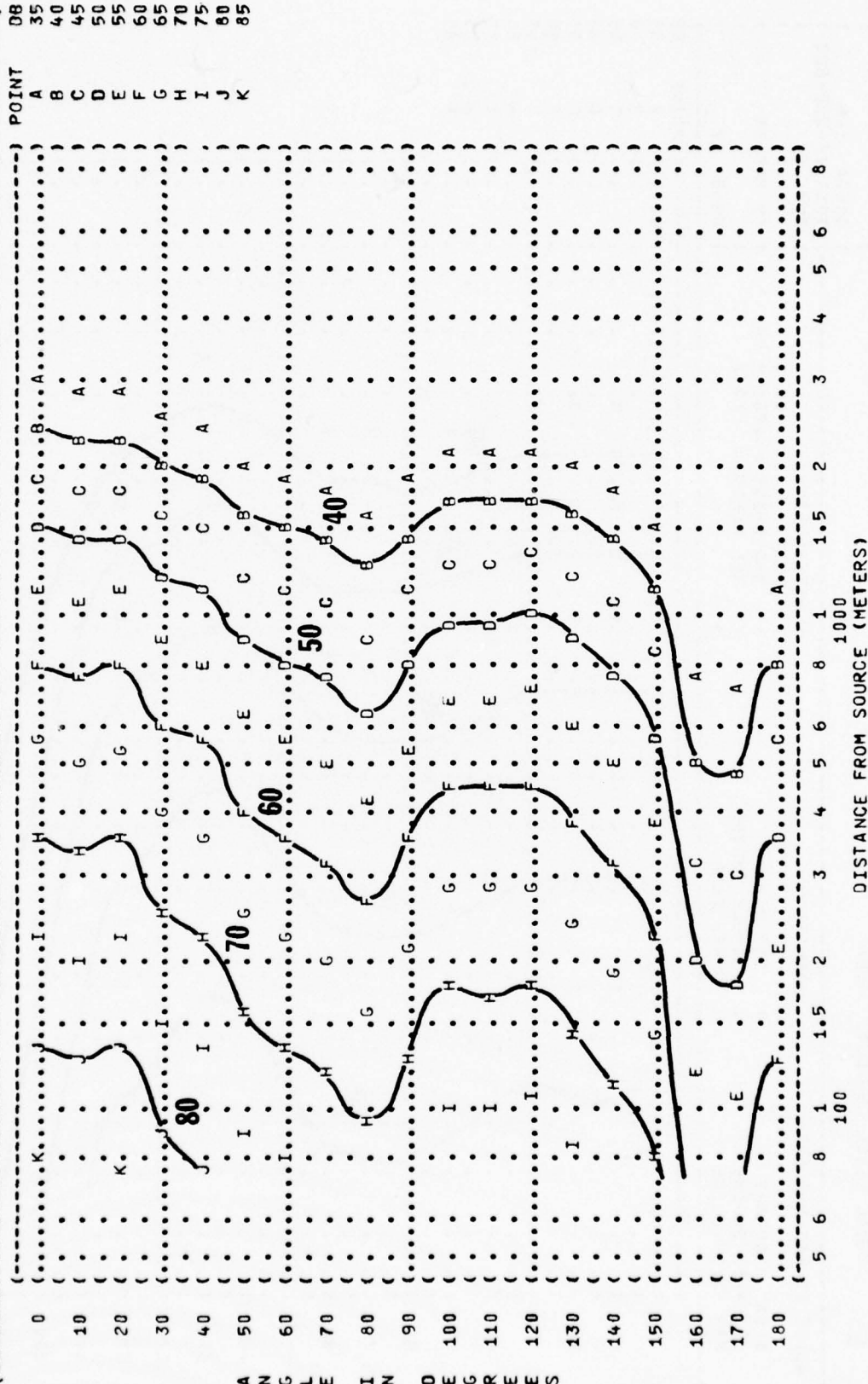


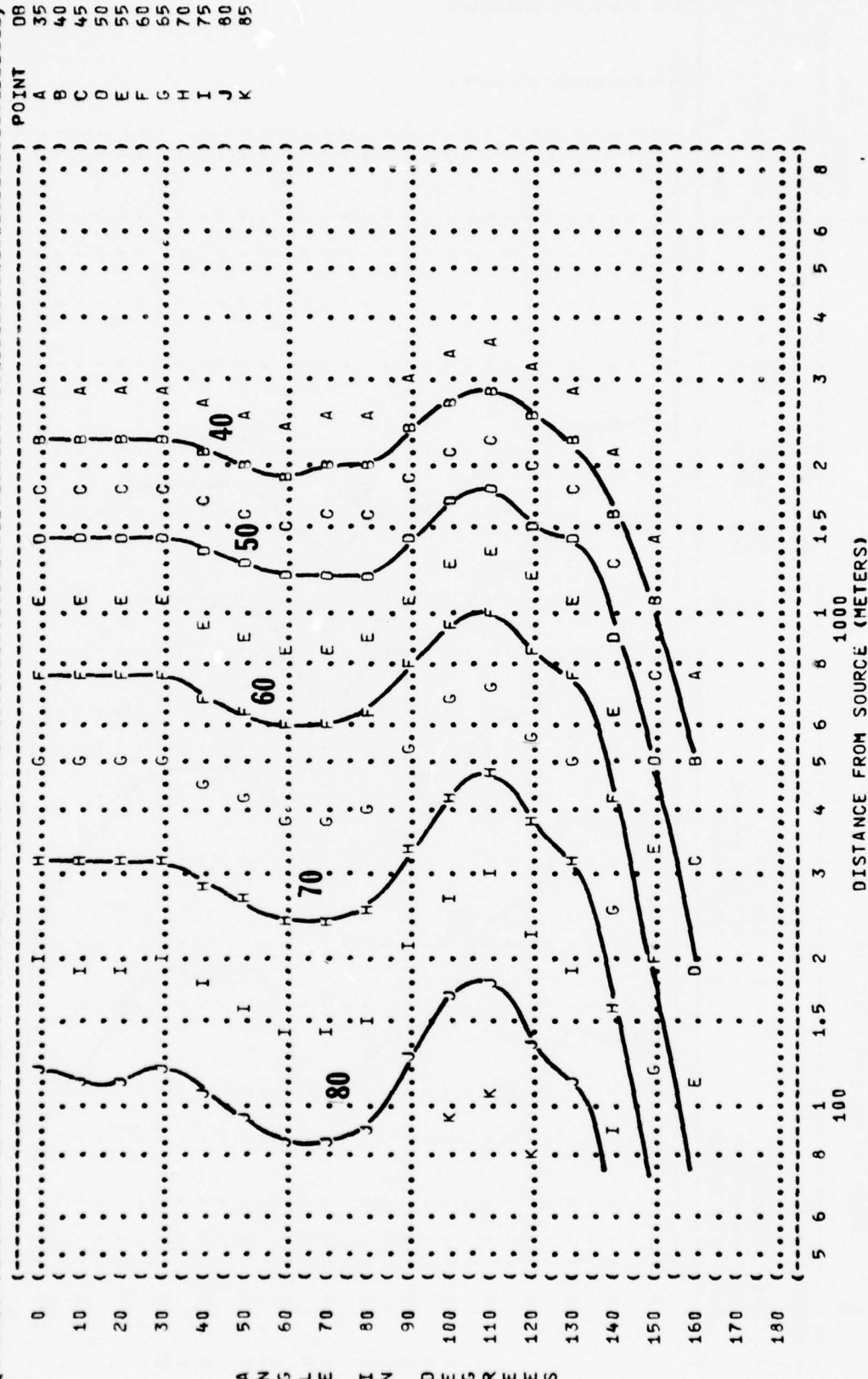


FIGURE: PERCEIVED NOISE LEVEL WITH SMOOTH TONE CORRECTION (PNLT)  
 7  
 IDENTIFICATION:  
 OMEGA 1.4  
 TEST 75-002-003  
 RUN 06  
 NOISE SOURCE/SUBJECT: A-6A AIRCRAFT  
 J52-P-8A ENGINE  
 FAR FIELD NOISE  
 OPERATION: MILITARY POWER  
 99% RPM  
 BOTH ENGINES  
 FREE FLOW  
 METEOROLOGY: TEMP = 15 C  
 BAR PRESS = .760 M HG  
 REL HUMID = 70 %  
 05 MAY 75  
 PAGE 16



( FIGURE: 8 )  
 ( PREFERRED SPEECH INTERFERENCE LEVEL (PSIL) )  
 ( EQUAL LEVEL CONTOURS (DB) )  
 ( NOISE SOURCE/SUBJECT: )  
 ( OPERATION: )  
 ( A-6A AIRCRAFT )  
 ( J52-P-8A ENGINE )  
 ( FAR FIELD NOISE )  
 ( METEOROLOGY: )  
 ( TEMP = 15 C )  
 ( BAR PRESS = .760 M HG )  
 ( REL HUMID = 70 % )  
 ( IDENTIFICATION: )  
 ( OMEGA 1.4 )  
 ( TEST 75-002-003 )  
 ( RUN 01 )  
 ( 05 MAY 75 )  
 ( PAGE 17 )



[illegible]









88

IDENTIFICATION:  
OMEGA 1.4  
TEST 75-002-00  
RUN 05  
05 MAY 75  
PAGE 17

NOISE SOURCE/SUBJECT:

A-6A AIRCRAFT	(	75% RPM	(
J52-P-8A ENGINE	(	BOTH ENGINES	(
FAR FIELD NOISE	(	FREE FLOW	(

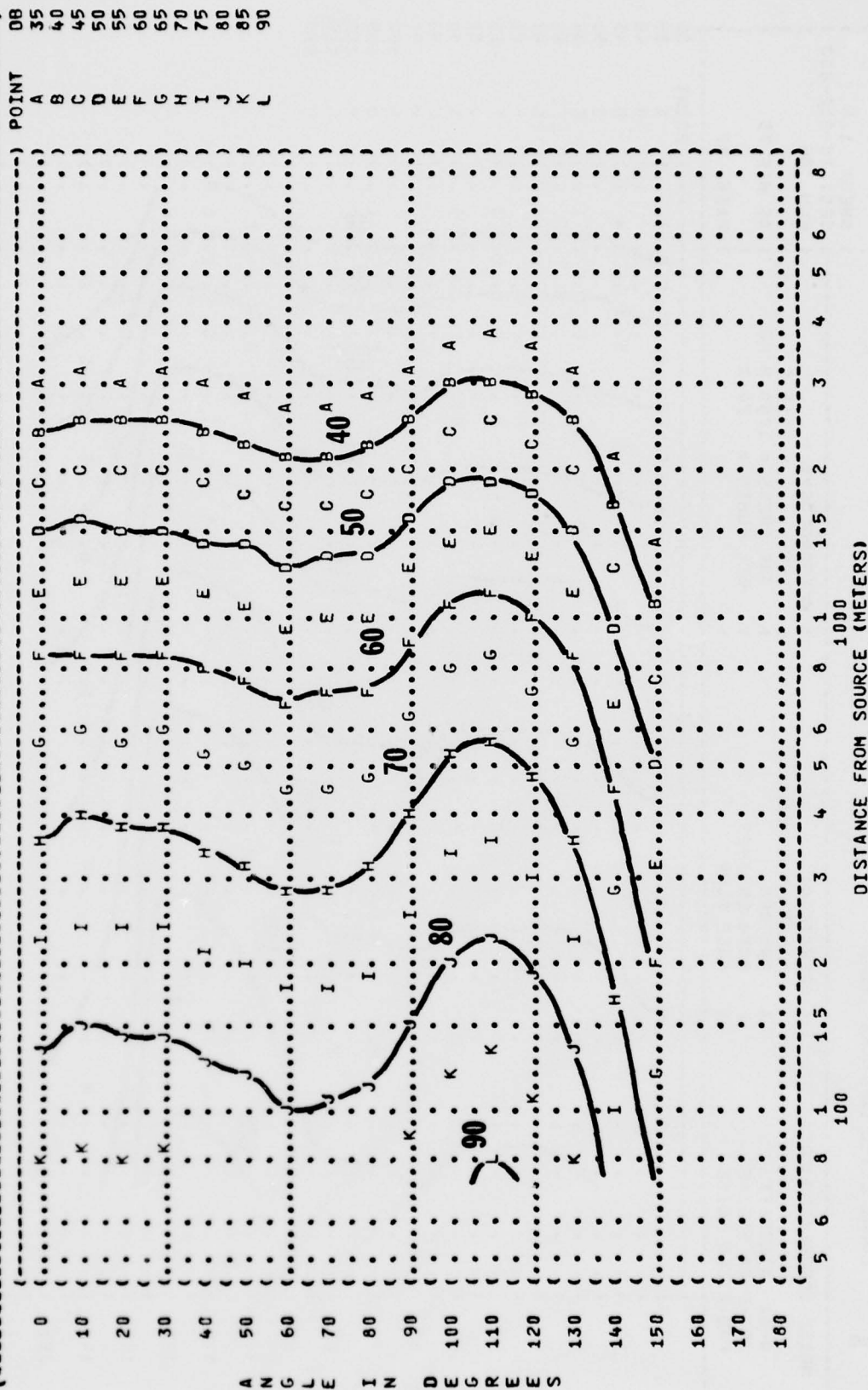
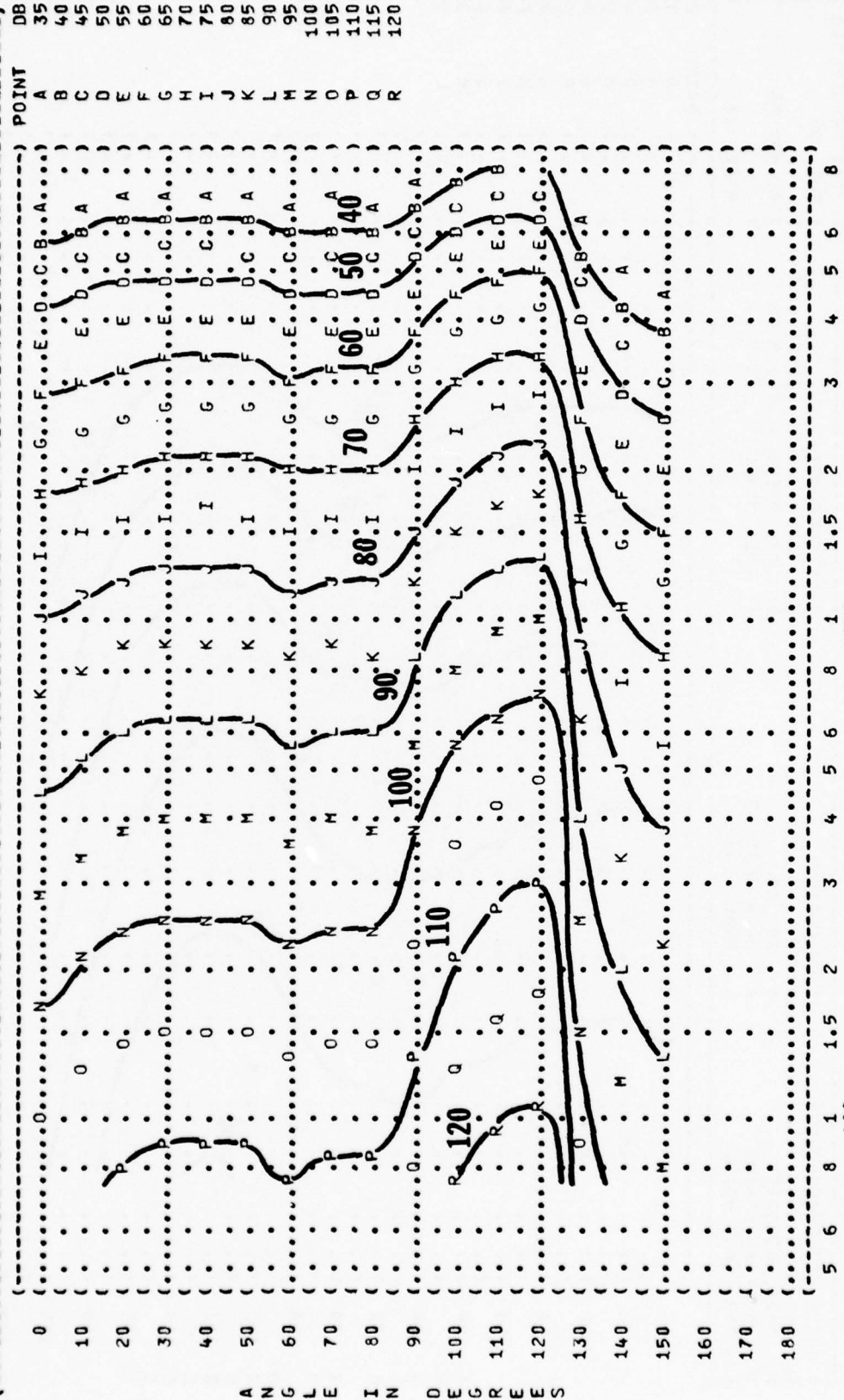


FIGURE: PREFERRED SPEECH INTERFERENCE LEVEL (PSIL)  
 8  
 IDENTIFICATION:  
 OMEGA 1.4  
 TEST 75-002-003  
 RUN 06  
 METEOROLOGY:  
 TEMP = 15 C  
 BAR PRESS = .760 M HG  
 REL HUMID = 70 %  
 05 MAY 75  
 PAGE 17



DISTANCE FROM SOURCE (METERS)



GURE: MAXIMUM PERMISSIBLE TIME {T} FOR ONE EXPOSURE PER DAY (AFR 161-35, JULY 73)  
9 EQUAL TIME CONTOURS (MINUTES)  
NO PROTECTION

IDENTIFICATION:  
)  
)  
OMEGA 1.4

ISE SOURCE/SUBJECT: ) OPERATION: ) METEOROLOGY: ) RUN 01  
( IDLE POWER ) )  
( 60% RPM ) ) BAR PRESS = 15 C )  
( SINGLE ENGINE ) ) REL HUMID = .760 M HG ) 05 MAY 75  
( FREE FLOW ) ) ) PAGE 7

[illegible]

ANGLE IN DEGREES

DISTANCE FROM SOURCE (METERS)







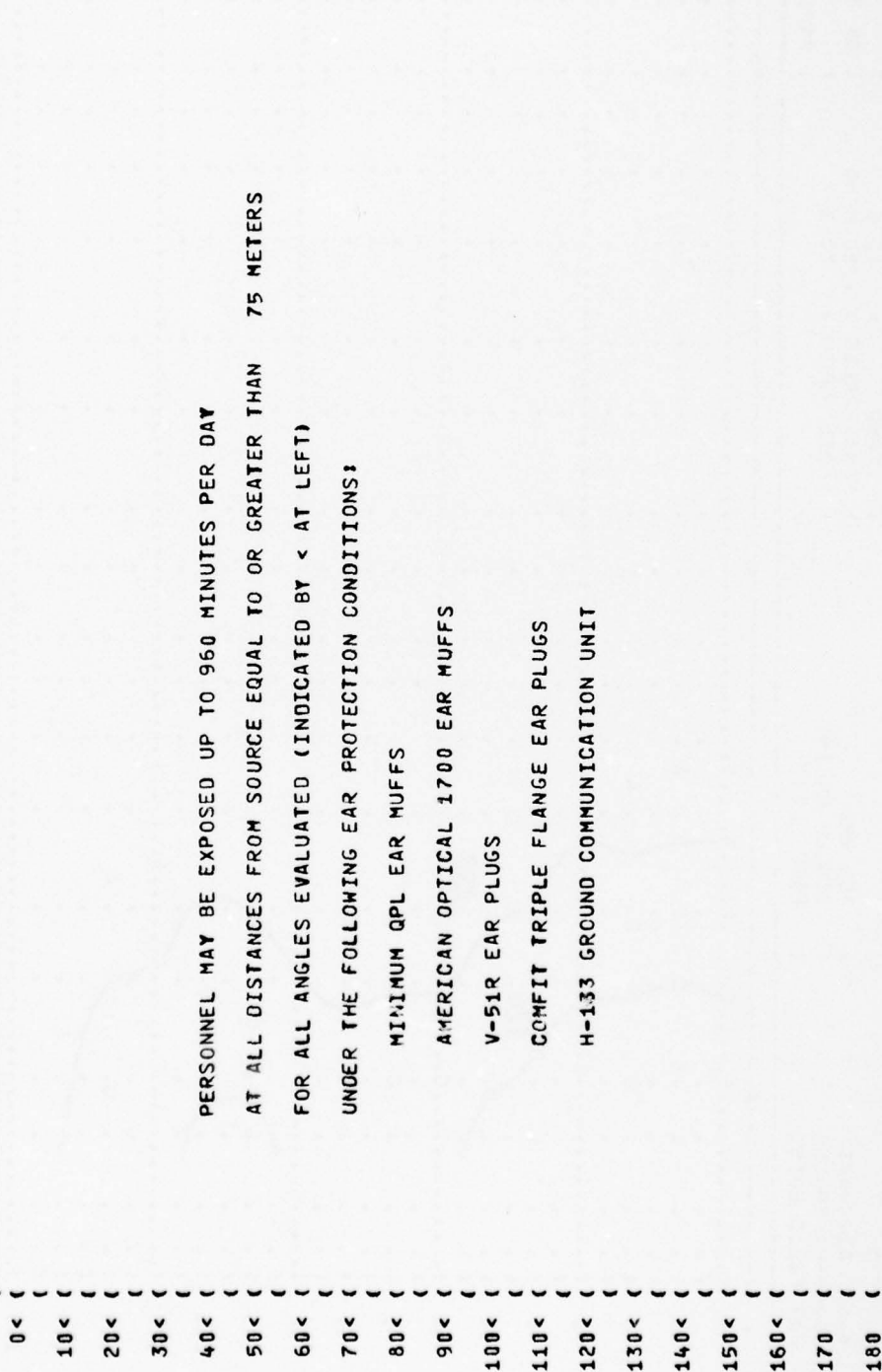
FIGURE: MAXIMUM PERMISSIBLE TIME (T) FOR ONE EXPOSURE PER DAY (AFR 161-35, JULY 73)

9

IDENTIFICATION: OMEGA 1.4  
TEST 75-002-003  
RUN 02

NOISE SOURCE/SUBJECT: OPERATION: METEOROLOGY: TEMP = 15 C  
A-6A AIRCRAFT 75% RPM BAR PRESS = .760 M HG  
J52-P-8A ENGINE SINGLE ENGINE REL HUMID = 70 %  
FAR FIELD NOISE FREE FLOW

05 MAY 75  
PAGE 8



PERSONNEL MAY BE EXPOSED UP TO 960 MINUTES PER DAY  
AT ALL DISTANCES FROM SOURCE EQUAL TO OR GREATER THAN 75 METERS

FOR ALL ANGLES EVALUATED (INDICATED BY < AT LEFT)

UNDER THE FOLLOWING EAR PROTECTION CONDITIONS:

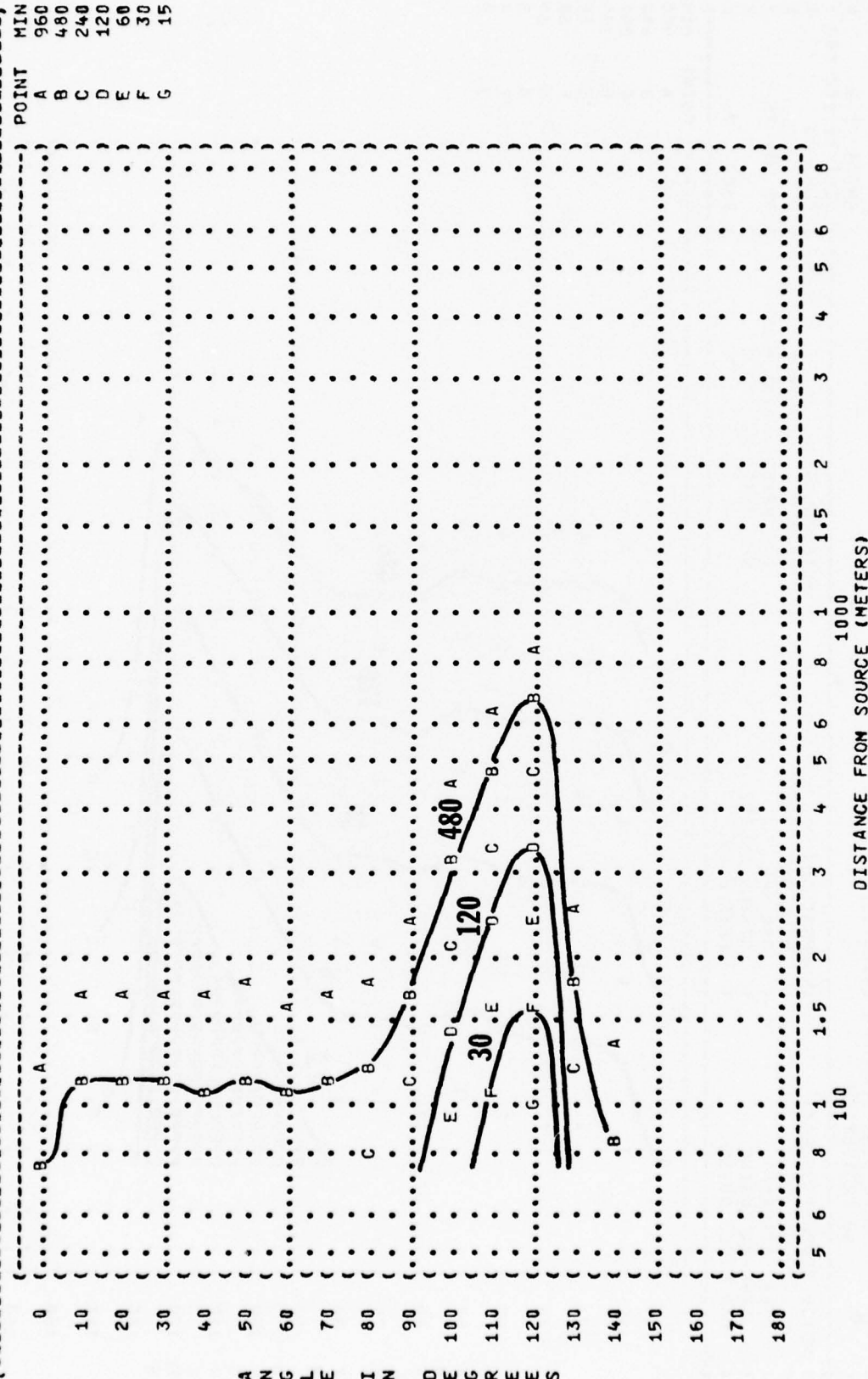
- MINIMUM QPL EAR MUFFS
- AMERICAN OPTICAL 1700 EAR MUFFS
- V-51R EAR PLUGS
- COMFIT TRIPLE FLANGE EAR PLUGS
- H-133 GROUND COMMUNICATION UNIT

DISTANCE FROM SOURCE (METERS)

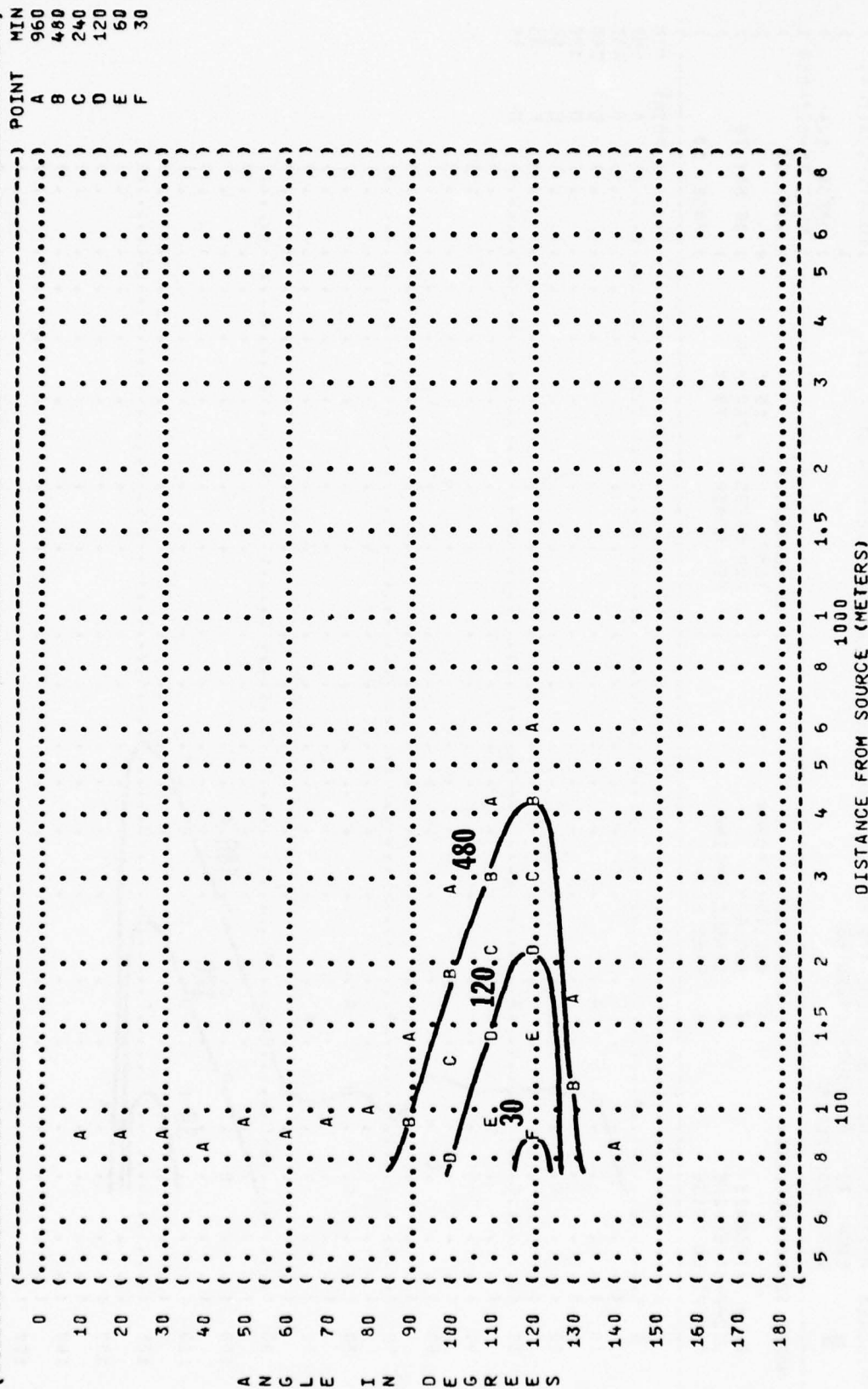




	MIN	POINT
0	(.....) A.....)	A 960
	(.....) B.....)	B 480
10	(.....) .....	C 240
	(.....) A.....)	D 120
20	(.....) .....	E 60
	(.....) A.....)	F 30
30	(.....) B.....)	G 15

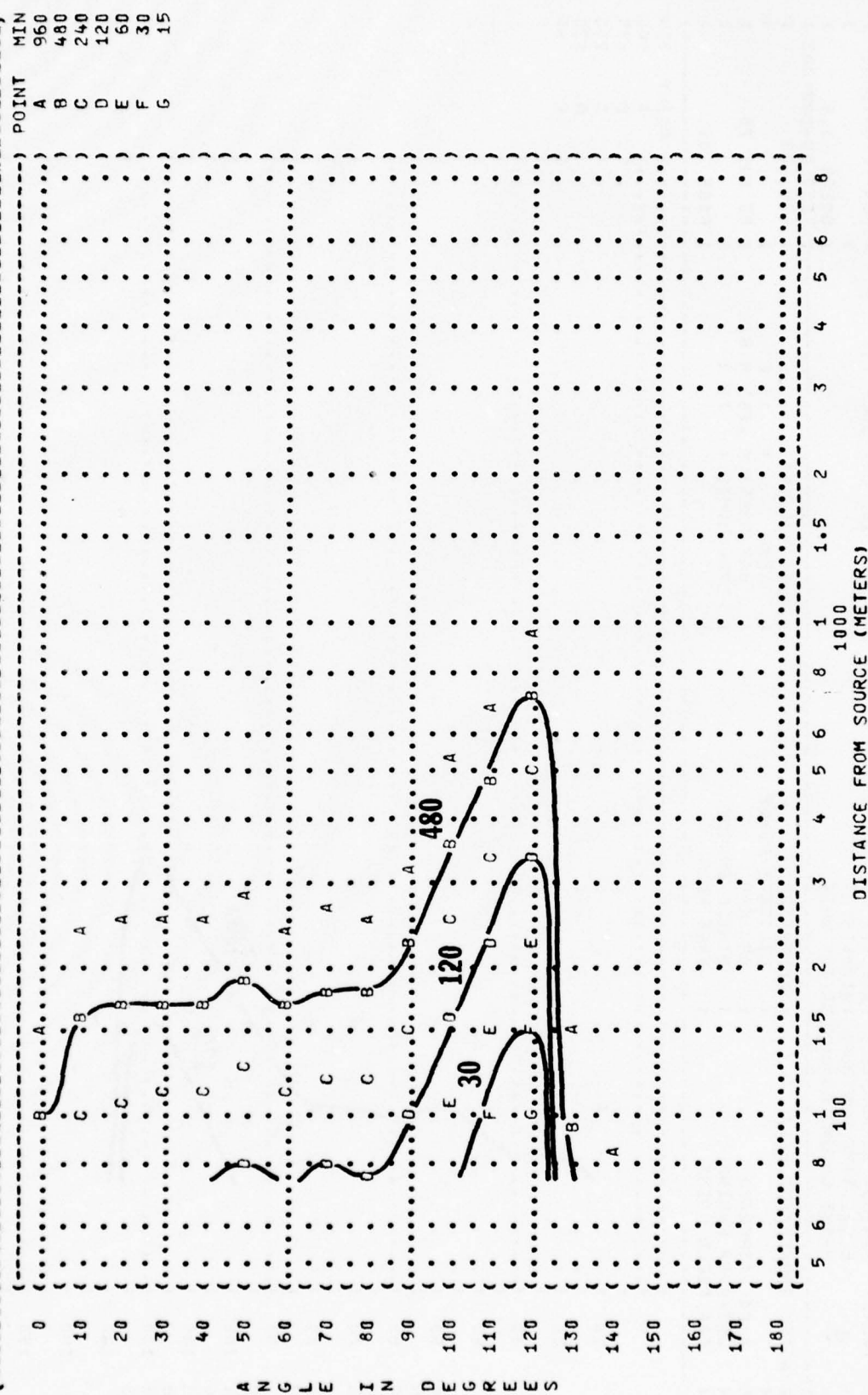


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( ( FIGURE: MAXIMUM PERMISSIBLE TIME (T) FOR ONE EXPOSURE PER DAY (AFR 161-35, JULY 73) ) IDENTIFICATION: )
( ( EQUAL TIME CONTOURS (MINUTES) ) )
( ( AMERICAN OPTICAL 1700 EAR MUFFS ) ) OMEGA 1.4
( ( ) ) TEST 75-002-003
( ( NOISE SOURCE/SUBJECT: ) OPERATION: ) METEOROLOGY: ) RUN 03
( ( ) ) TEMP = 15 C ) )
( ( A-6A AIRCRAFT ) MILITARY POWER ) BAR PRESS = .760 M HG ) 05 MAY 75
( ( J52-P-8A ENGINE ) 99% RPM ) REL HUMID = 70 % ) )
( ( FAR FIELD NOISE ) SINGLE ENGINE ) )
( ( ) FREE FLOW ) ) PAGE 9
```



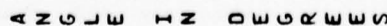


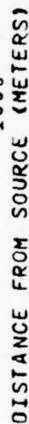
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(-----)
( FIGURE: MAXIMUM PERMISSIBLE TIME (T) FOR ONE EXPOSURE PER DAY (AFR 161-35, JULY 73) ) IDENTIFICATION: )
( EQUAL TIME CONTOURS (MINUTES) ) )
( COMFIT TRIPLE FLANGE EAR PLUGS ) ) OMEGA 1.4 )
(-----)
( NOISE SOURCE/SUBJECT: ) OPERATION: ) METEOROLOGY: ) TEST 75-002-003 )
( A-6A AIRCRAFT ) MILITARY POWER ) TEMP = 15 C ) RUN 03 )
( J52-P-8A ENGINE ) 99% RPM ) BAR PRESS = .760 M. HG ) )
( FAR FIELD NOISE ) SINGLE ENGINE ) REL HUMID = 70 % ) )
( FREE FLOW ) ) PAGE 11 )
(-----)
```





	MIN	POINT
0	A	960
	B	480
10	C	240
	D	120
20	E	60



[illegible]

PERSONNEL MAY BE EXPOSED UP TO 960 MINUTES PER DAY  
AT ALL DISTANCES FROM SOURCE EQUAL TO OR GREATER THAN 75 METERS  
FOR ALL ANGLES EVALUATED (INDICATED BY < AT LEFT)  
UNDER THE FOLLOWING EAR PROTECTION CONDITIONS:

MINIMUM QPL EAR MUFFS  
AMERICAN OPTICAL 1700 EAR MUFFS  
V-51R EAR PLUGS  
COMFIT TRIPLE FLANGE EAR PLUGS  
H-133 GROUND COMMUNICATION UNIT

H-133 GROUND COMMUNICATION UNIT

DISTANCE FROM SOURCE (METERS)

FIGURE: MAXIMUM PERMISSIBLE TIME (T) FOR ONE EXPOSURE PER DAY (AFR 161-35, JULY 73)

IDENTIFICATION:

9

NO PROTECTION

OMEGA 1.4

TEST 75-002-003

RUN 05

05 MAY 75

PAGE 7

NOISE SOURCE/SUBJECT:

OPERATION:

METEOROLOGY:

TEMP = 15 C

BAR PRESS = .760 M HG

REL HUMID = 70 %

A-6A AIRCRAFT

75% RPM

J52-P-8A ENGINE

BOTH ENGINES

FAR FIELD NOISE

FREE FLOW

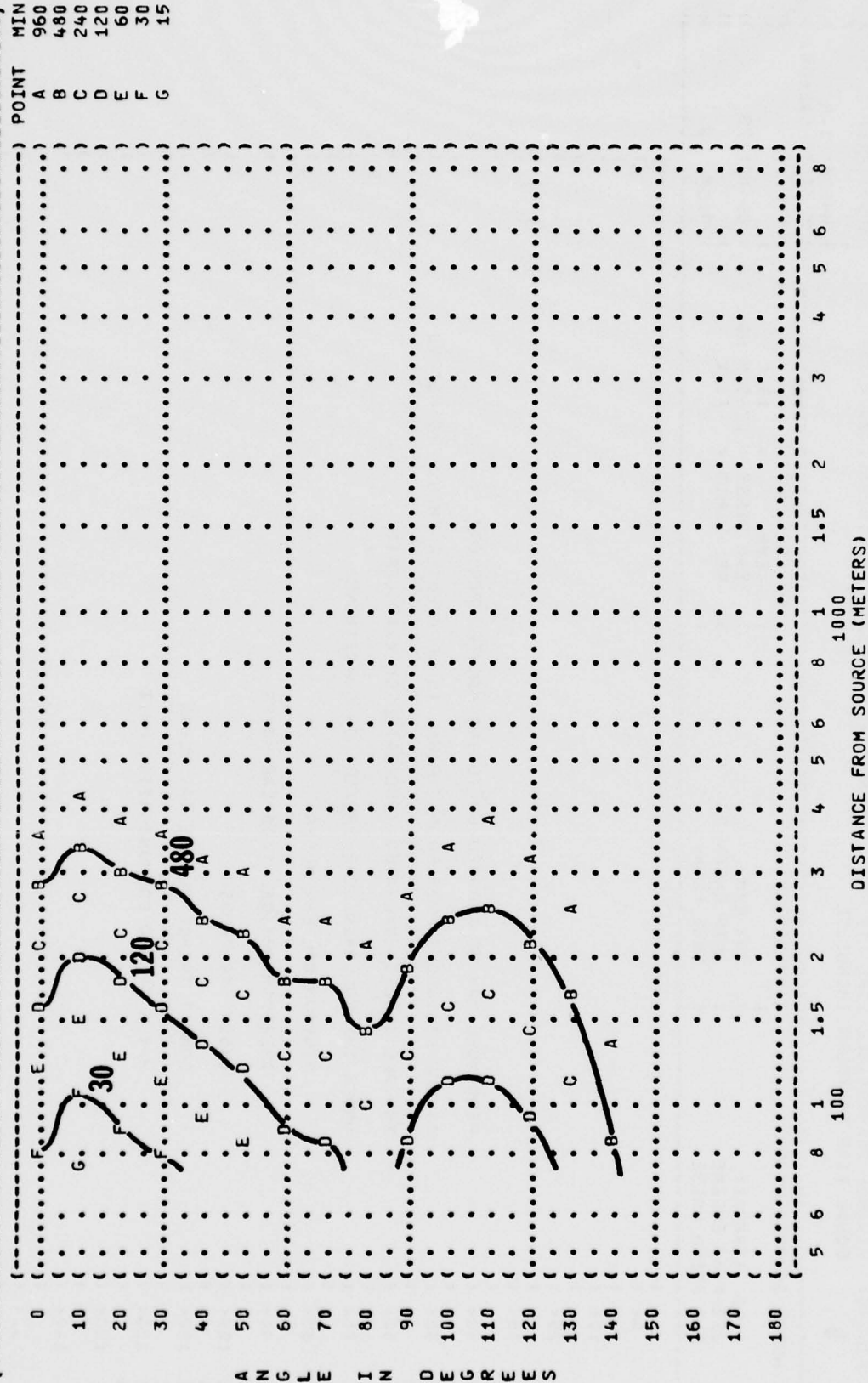




FIGURE: MAXIMUM PERMISSIBLE TIME (T) FOR ONE EXPOSURE PER DAY (AFR 161-35, JULY 73)

IDENTIFICATION:

9

NOISE SOURCE/SUBJECT: OPERATION: METEOROLOGY: OMEGA 1.4

A-6A AIRCRAFT ( 75% RPM ) TEMP = 15 C

J52-P-8A ENGINE ( BOTH ENGINES ) BAR PRESS = .760 M HG

FAR FIELD NOISE ( FREE FLOW ) REL HUMID = 70 %

TEST 75-002-003

RUN 05

05 MAY 75

PAGE 8

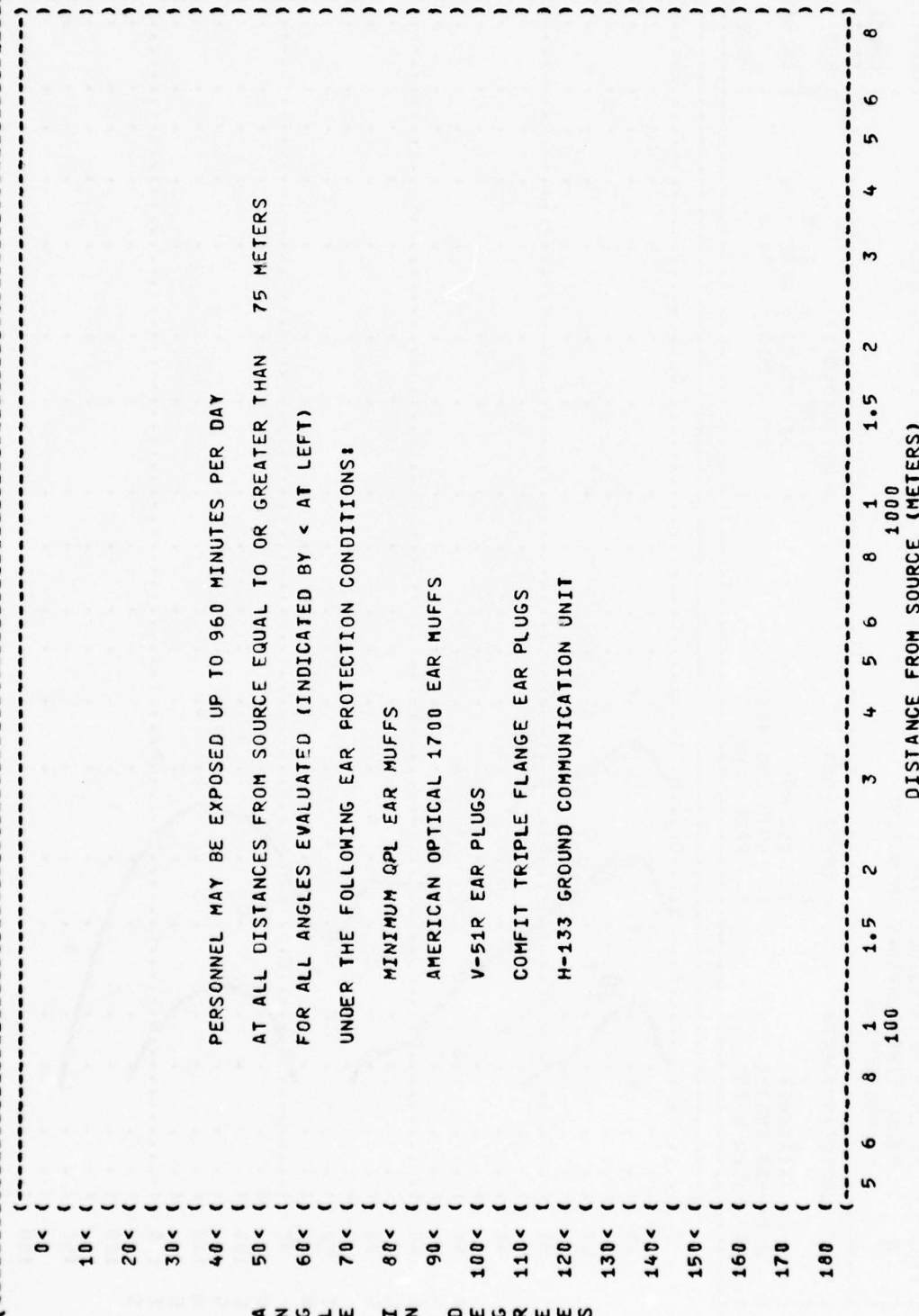


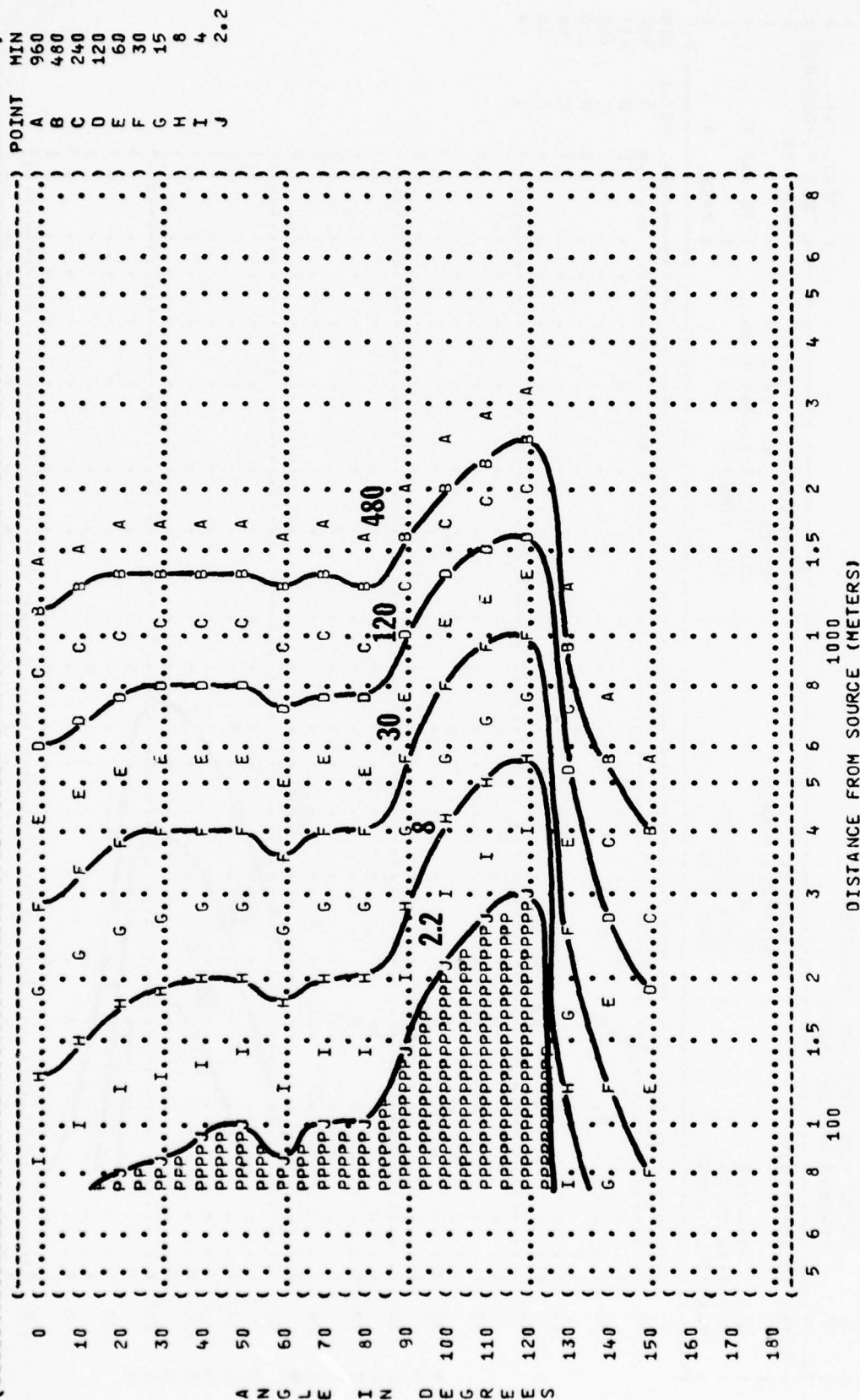
FIGURE: MAXIMUM PERMISSIBLE TIME (T) FOR ONE EXPOSURE PER DAY (AFR 161-35, JULY 73)

9  
EQUA TIME CONTOURS (MINUTES)  
NO PROTECTION

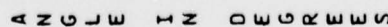
NOISE SOURCE/SUBJECT: ( OPERATION: ) METEOROLOGY: )  
 ( ( MILITARY POWER ) TEMP = 15 C )  
 ( ( 99% RPM ) BAR PRESS = .760 M HG )  
 ( ( BOTH ENGINES ) REL HUMID = 70 % )  
 ( ( FREE FLOW ) )

A-6A AIRCRAFT  
 J52-P-8A ENGINE  
 FAR FIELD NOISE

OMEGA 1.4  
 TEST 75-002-003  
 RUN 06  
 05 MAY 75  
 PAGE 7



P ADDITIONAL EAR PROTECTION REQUIRED.

[illegible]

[illegible]

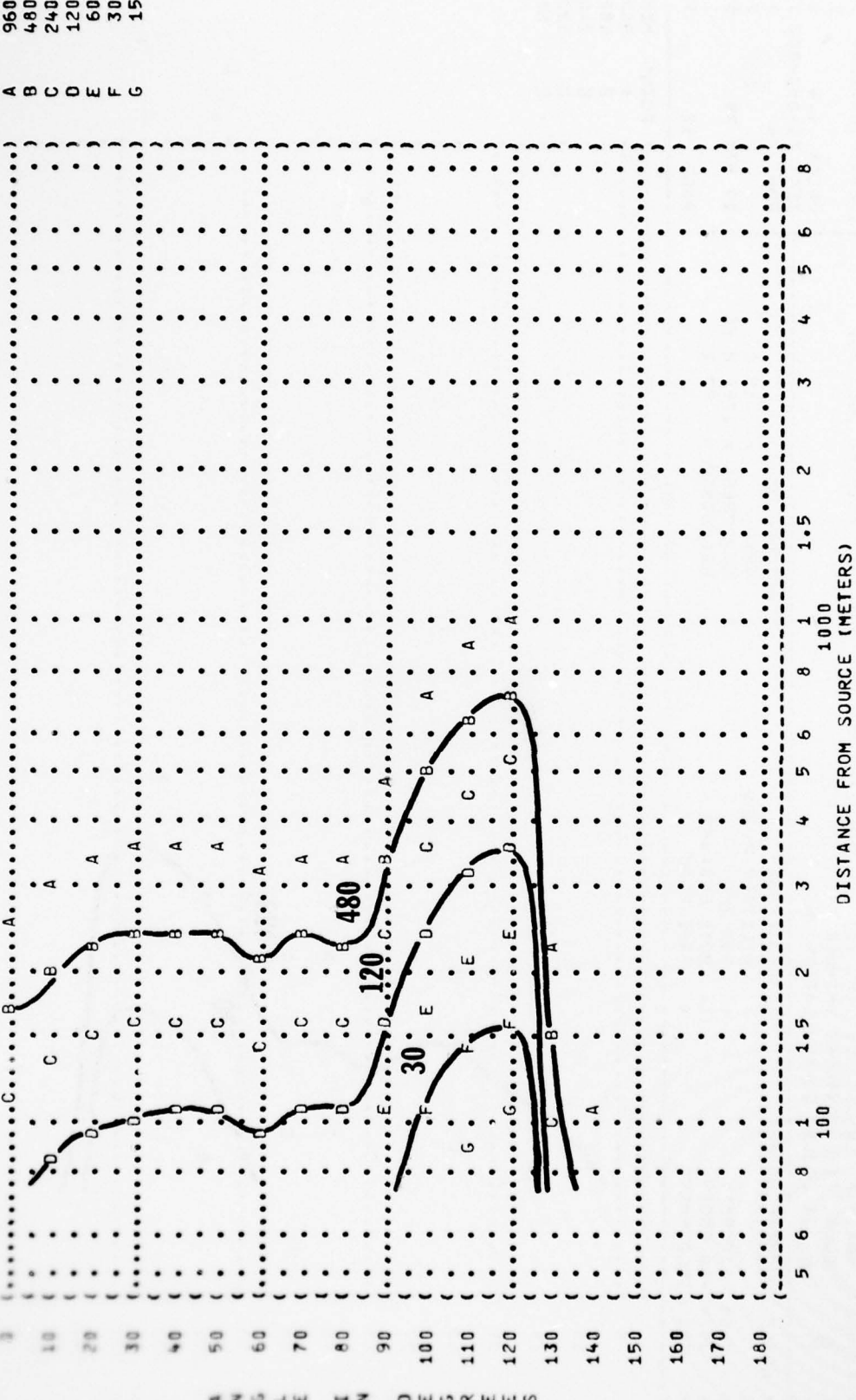


[illegible]

MAXIMUM PERMISSIBLE TIME (T) FOR ONE EXPOSURE PER DAY (AFR 161-35, JULY 73) IDENTIFICATION:  
 EQUAL TIME CONTOURS (MINUTES)  
 COMBAT TRIPLE FLANGE EAR PLUGS

METEOROLOGY: TEMPERATURE = 15 C  
 BAR PRESS = .760 M HG  
 REL HUMID = 70 %  
 OPERATION: MILITARY POWER  
 99% RPM  
 BOTH ENGINES  
 FREE FLOW

OMEGA 1.4  
 TEST 75-002-003  
 RUN 06  
 05 MAY 75  
 PAGE 11



DISTANCE FROM SOURCE (METERS)

POINT	MIN
A	960
B	480
C	240
D	120
E	60

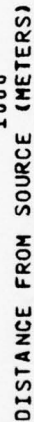


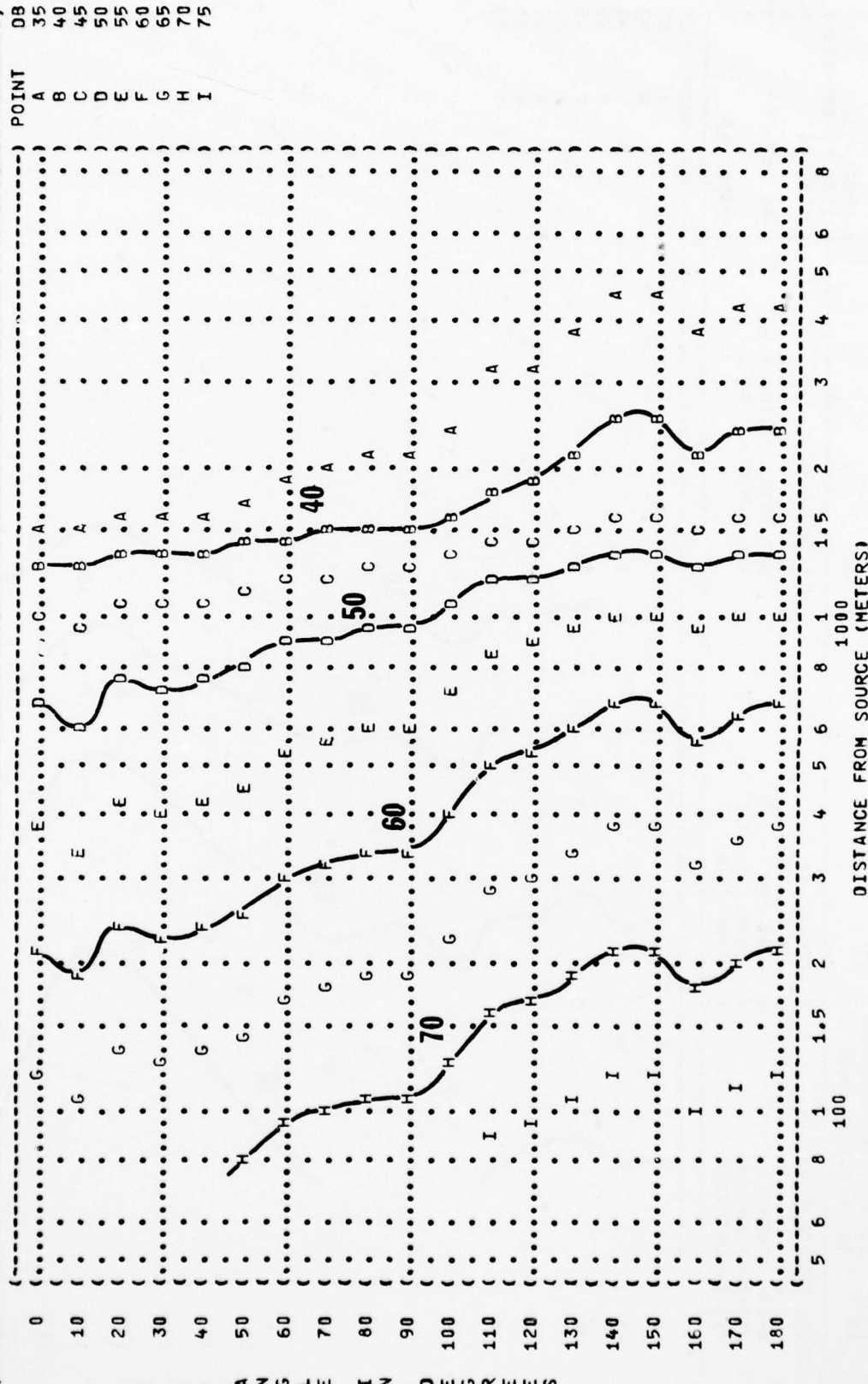
FIGURE: SOUND PRESSURE LEVEL (SPL)  
 10 EQUAL LEVEL CONTOURS (DB)  
 31.5 HZ OCTAVE BAND

NOISE SOURCE/SUBJECT:

OPERATION:  
 ( ) IDLE POWER  
 ( ) 60% RPM  
 ( ) SINGLE ENGINE  
 ( ) FREE FLOW

METEOROLOGY:  
 ( ) TEMP = 15 C  
 ( ) BAR PRESS = .760 M HG  
 ( ) REL HUMID = 70 %

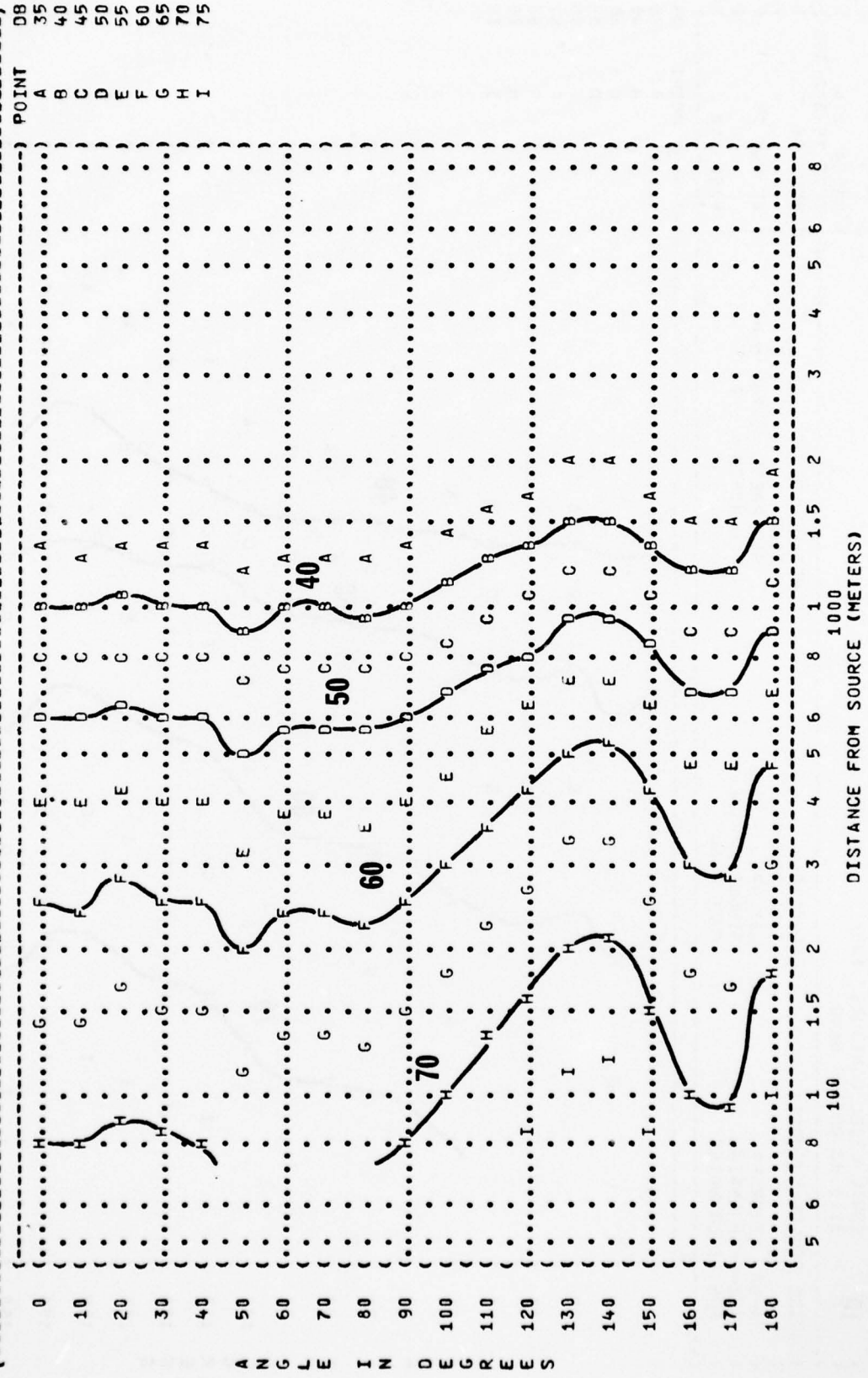
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 ( ) OMEGA 1.4  
 ( ) TEST 75-002-003  
 ( ) RUN 01  
 ( ) 05 MAY 75  
 ( ) PAGE 18



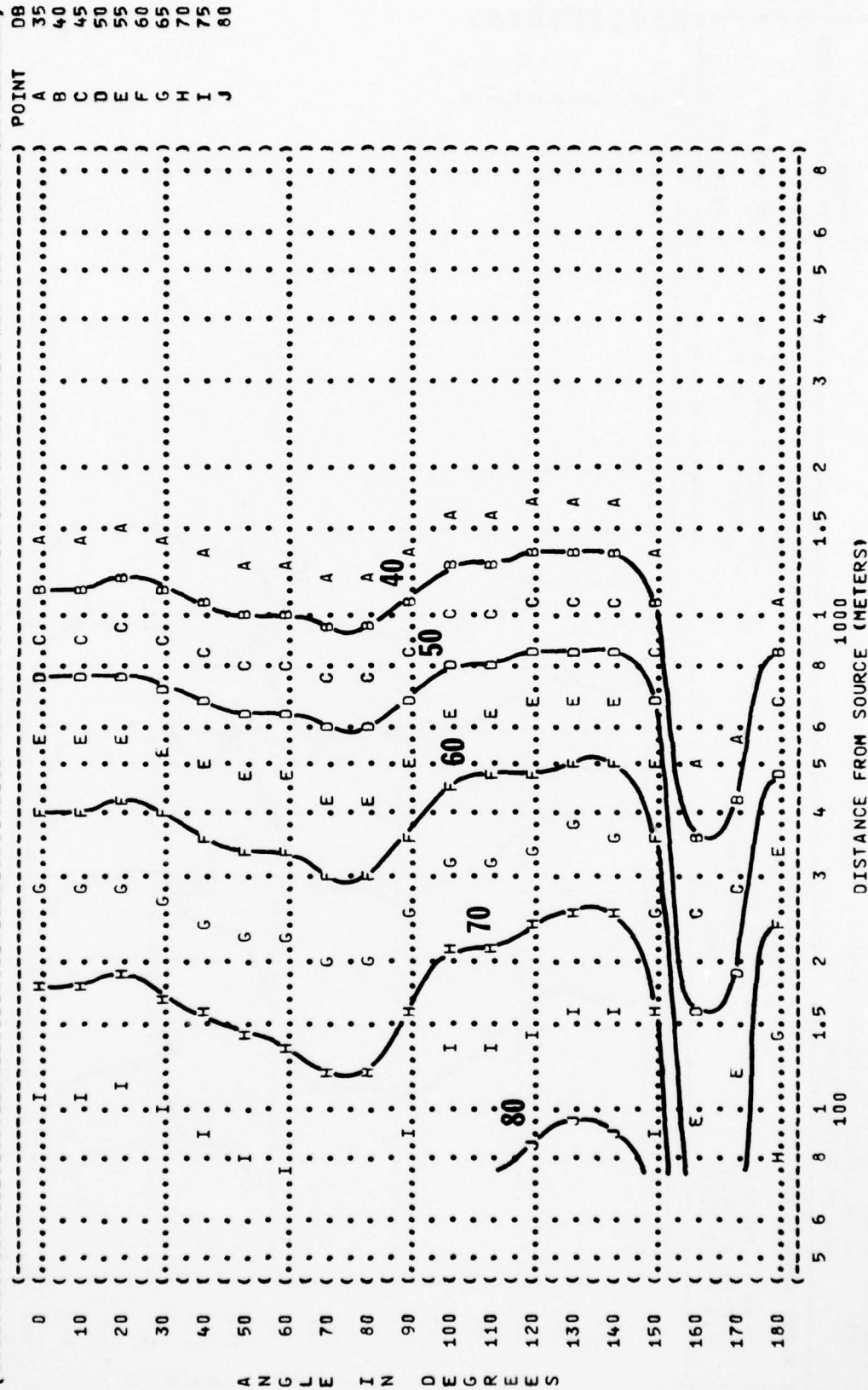
A N G L E I N D E G R E E S



( FIGURE: SOUND PRESSURE LEVEL (SPL)  
 ( 10 EQUAL LEVEL CONTOURS (DB)  
 ( 63 HZ OCTAVE BAND  
 ( NOISE SOURCE/SUBJECT: ( OPERATION:  
 ( ( IDLE POWER  
 ( ( 60% RPM  
 ( ( SINGLE ENGINE  
 ( ( FREE FLOW  
 ( A-6A AIRCRAFT  
 ( J52-P-8A ENGINE  
 ( FAR FIELD NOISE  
 ( METEOROLOGY:  
 ( TEMP = 15 C  
 ( BAR PRESS = .760 M HG  
 ( REL HUMID = 70 %  
 ( IDENTIFICATION:  
 ( OMEGA 1.4  
 ( TEST 75-002-003  
 ( RUN 01  
 ( 05 MAY 75  
 ( PAGE 19  
 (



```
( { FIGURE# SOUND PRESSURE LEVEL {SPL} ) IDENTIFICATION# )
( { 10 EQUAL LEVEL CONTOURS (DB) ) )
( { 125 HZ OCTAVE BAND ) )
( { NOISE SOURCE/SUBJECT: ) METEOROLOGY: )
( { OPERATION: ) TEMP = 15 C )
( { IDLE POWER ) BAR PRESS = .760 M HG )
( { 60% RPM ) REL HUMID = 70 % )
( { SINGLE ENGINE ) )
( { FREE FLOW ) PAGE 20 )
```



ANGLE IN DEGREES

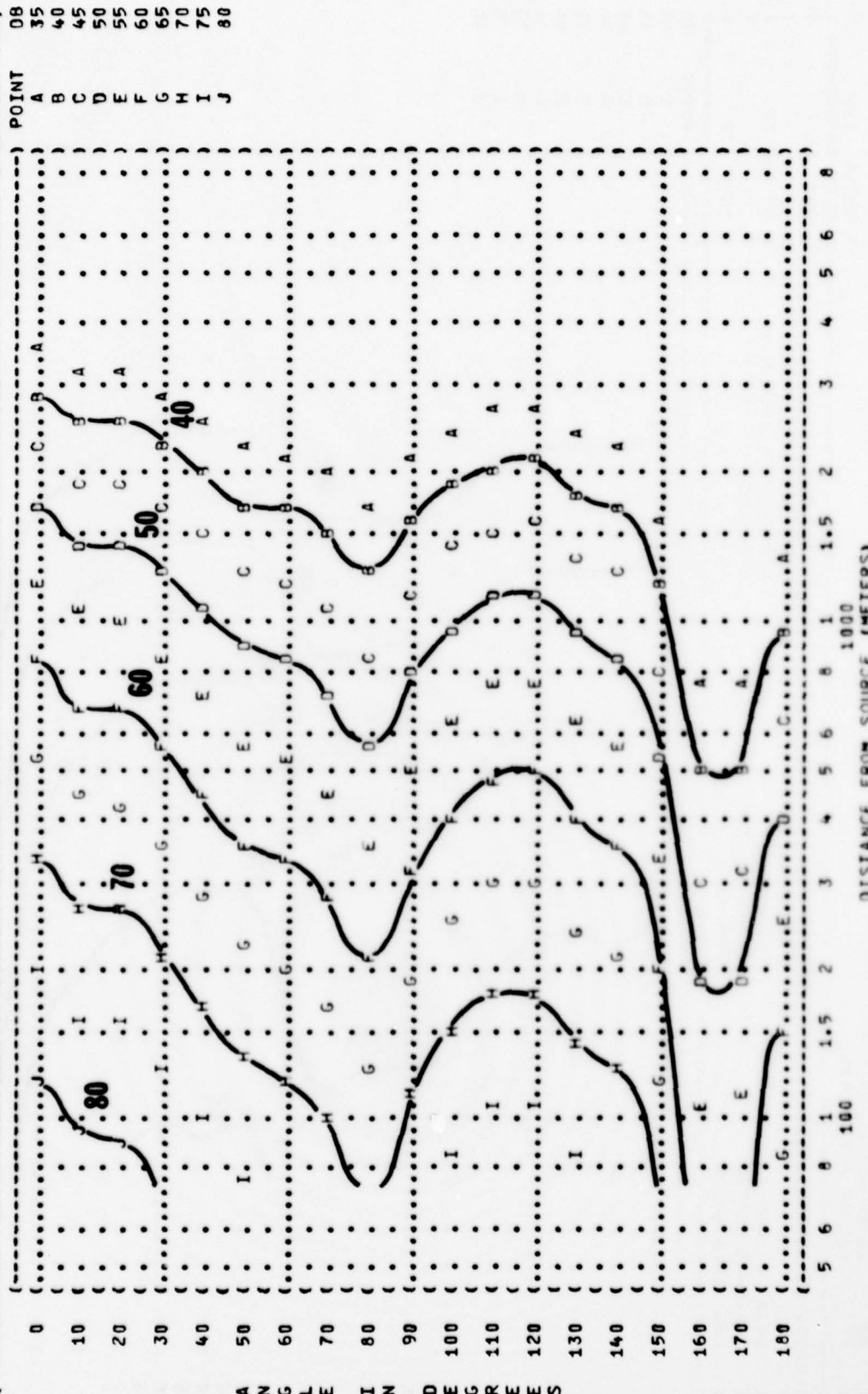




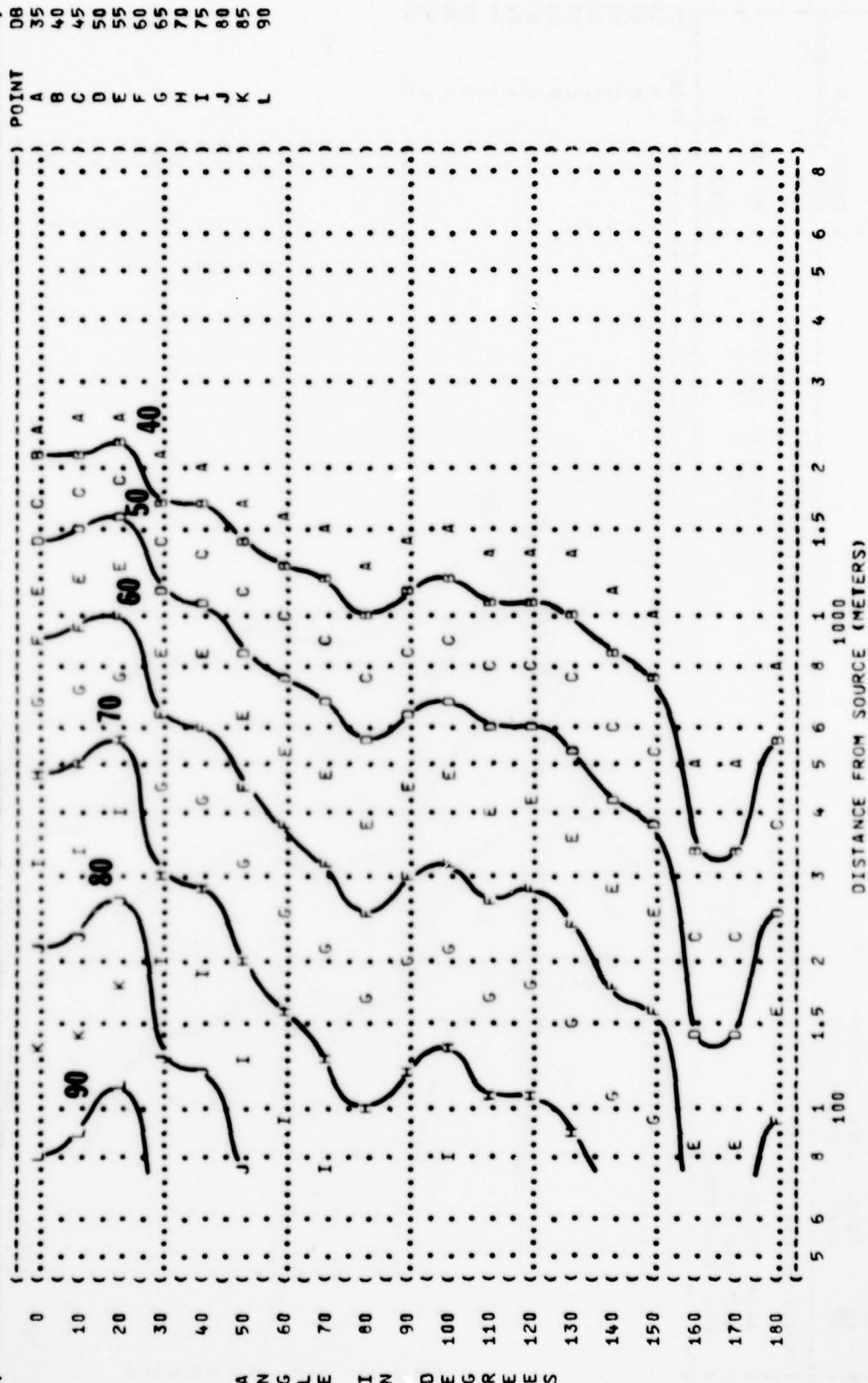




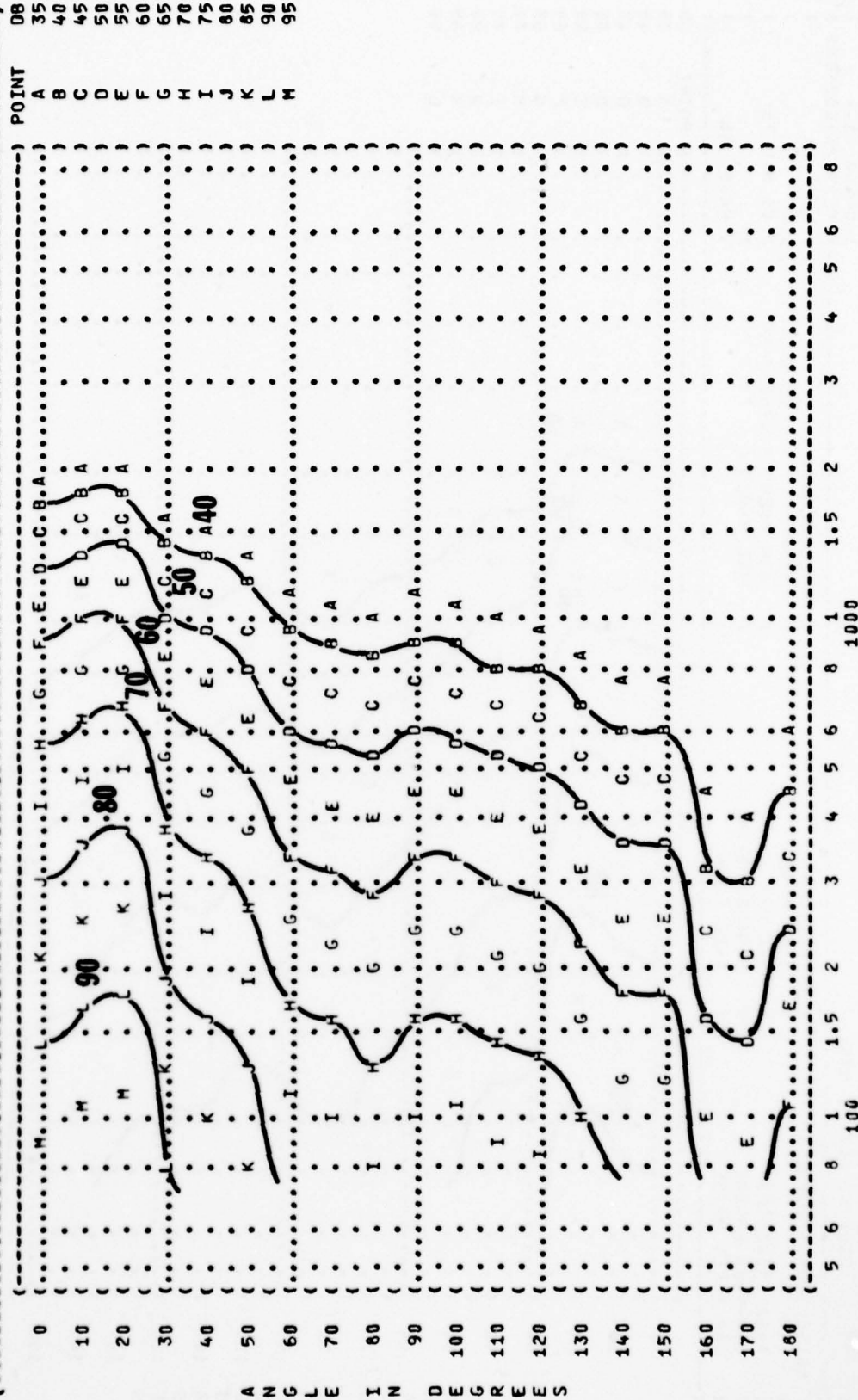
( FIGURE: SOUND PRESSURE LEVEL (SPL) )  
 ( 10 EQUAL LEVEL CONTOURS (DB) )  
 ( 1000 HZ OCTAVE BAND )  
 ( NOISE SOURCE/SUBJECT: )  
 ( A-6A AIRCRAFT )  
 ( J52-P-8A ENGINE )  
 ( FAR FIELD NOISE )  
 ( OPERATION: )  
 ( IDLE POWER )  
 ( 60% RPM )  
 ( SINGLE ENGINE )  
 ( FREE FLOW )  
 ( METEOROLOGY: )  
 ( TEMP = 15 C )  
 ( BAR PRESS = .760 M HG )  
 ( REL HUMID = 70 % )  
 ( IDENTIFICATION: )  
 ( OMEGA 1.4 )  
 ( TEST 75-002-003 )  
 ( RUN 01 )  
 ( 05 MAY 75 )  
 ( PAGE 23 )



( FIGURE: SOUND PRESSURE LEVEL (SPL) )  
 ( 10 EQUAL LEVEL CONTOURS (DB) )  
 ( 2000 HZ OCTAVE BAND )  
 ( NOISE SOURCE/SUBJECT: )  
 ( OPERATION: )  
 ( IDLE POWER )  
 ( 60% RPM )  
 ( SINGLE ENGINE )  
 ( FREE FLOW )  
 ( A-6A AIRCRAFT )  
 ( J52-P-8A ENGINE )  
 ( FAR FIELD NOISE )  
 ( METEOROLOGY: )  
 ( TEMP = 15 C )  
 ( BAR PRESS = .760 M HG )  
 ( REL HUMID = 70 % )  
 ( IDENTIFICATION: )  
 ( OMEGA 1.4 )  
 ( TEST 75-002-003 )  
 ( RUN 01 )  
 ( 05 MAY 75 )  
 ( PAGE 24 )



( FIGURE: SOUND PRESSURE LEVEL (SPL)  
 ( 10 EQUAL LEVEL CONTOURS (DB)  
 ( 4000 HZ OCTAVE BAND  
 ( NOISE SOURCE/SUBJECT: ( OPERATION:  
 ( ( IDLE POWER  
 ( A-6A AIRCRAFT ( 60% RPM  
 ( J52-P-8A ENGINE ( SINGLE ENGINE  
 ( FAR FIELD NOISE ( FREE FLOW  
 ( METEOROLOGY: ( TEMP = 15 C  
 ( BAR PRESS = .760 M HG  
 ( REL HUMID = 70 %  
 ( PAGE 25  
 ( IDENTIFICATION: ( OMEGA 1.4  
 ( TEST 75-002-003  
 ( RUN 01  
 ( 05 MAY 75  
 (



DISTANCE FROM SOURCE (METERS)

A N G L E I N D E G R E E S







```
( ( FIGURE: SOUND PRESSURE LEVEL {SPL} ) IDENTIFICATION: )
( ( EQUAL LEVEL CONTOURS (DB) ) )
( ( 10 ) OMEGA 1.4 )
( ( 31.5 HZ OCTAVE BAND ) TEST 75-002-003 )
( NOISE SOURCE/SUBJECT: ) METEOROLOGY: ) RUN 02 )
( ( OPERATION: ) )
( ( TEMP = 15 C ) )
( ( A-6A AIRCRAFT ) BAR PRESS = .760 M HG )
( ( J52-P-8A ENGINE ) SINGLE ENGINE ) 05 MAY 75 )
( ( FAR FIELD NOISE ) FREE FLOW ) PAGE 18 )
```

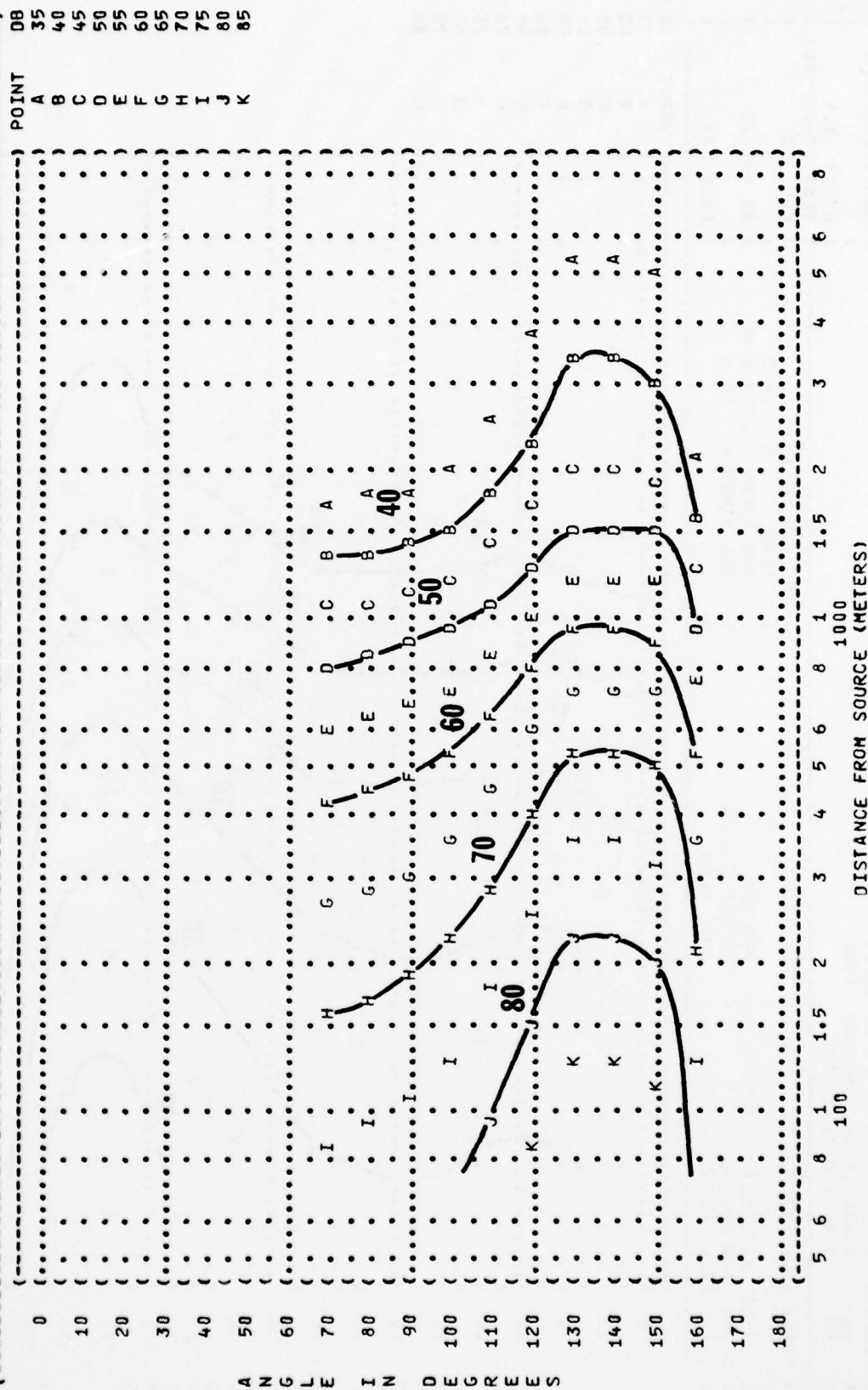
POINT	DB
A	35
B	40
C	45
D	50
E	55
F	60
G	65
H	70
I	75
J	80

The graph displays four curves, each labeled with a number (40, 50, 60, 70) and a series of letters (A through J) indicating data points. The x-axis is labeled 'DISTANCE FROM SOURCE (METERS)' and ranges from 0 to 1000. The y-axis is unlabeled but ranges from 0 to 180. The curves show a peak that shifts to the right and increases in height as the label number increases.

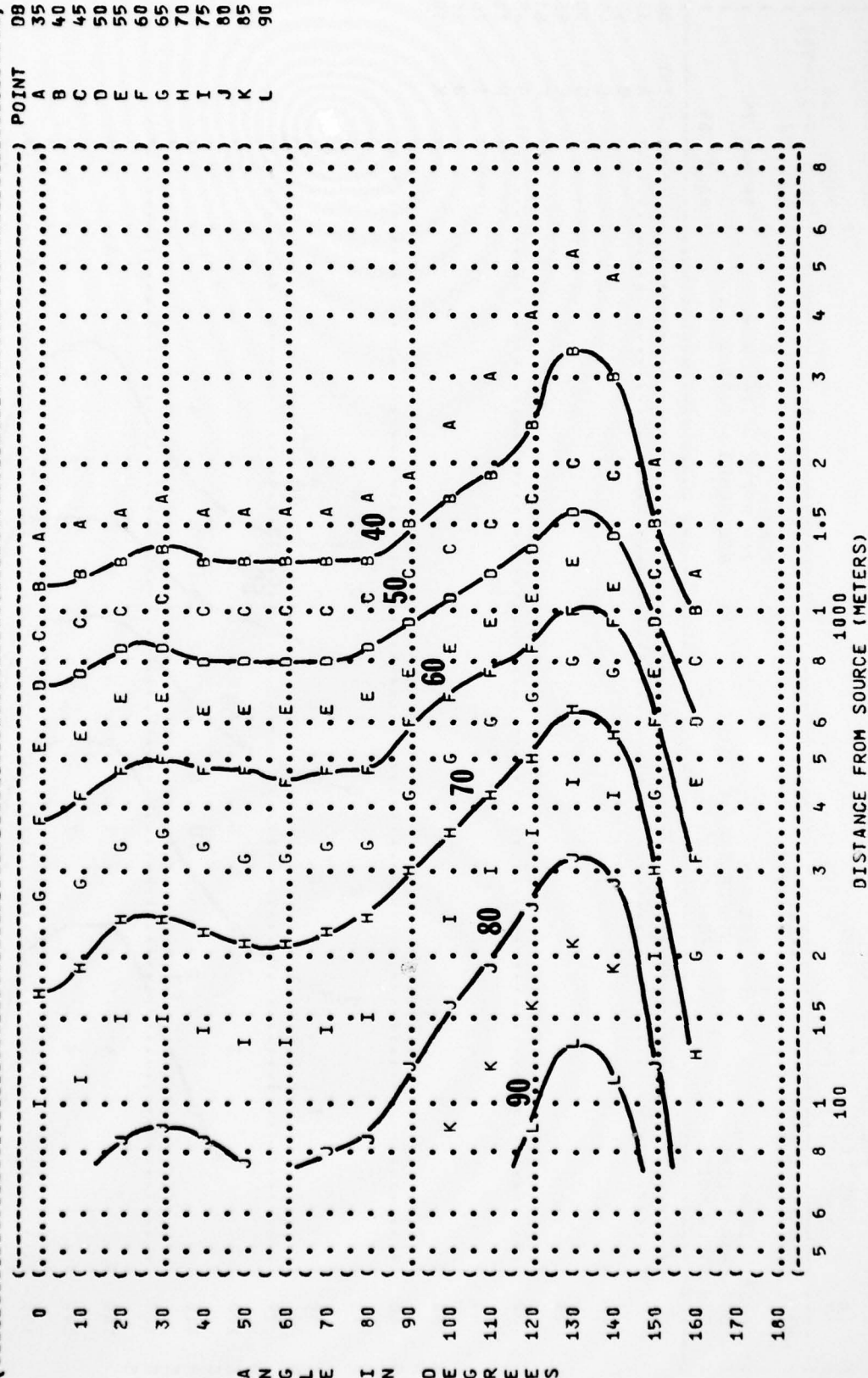
Distance (meters)	Curve 40 (A-J)	Curve 50 (A-J)	Curve 60 (A-J)	Curve 70 (A-J)
0				
100				
200				
300				
400				
500				
600				
700				
800				
900				
1000				

ANGLE IN DEGREES

```
(-----)
( FIGURE: SOUND PRESSURE LEVEL {SPL} ) IDENTIFICATION: )
( EQUAL LEVEL CONTOURS (DB) ) )
( 10 ) OMEGA 1.4 )
( 63 HZ OCTAVE BAND ) TEST 75-002-003 )
( NOISE SOURCE/SUBJECT: ) METEOROLOGY: ) RUN 02 )
( ) TEMP = 15 C )
( ) BAR PRESS = .760 M HG )
( ) SINGLE ENGINE ) REL HUMID = 70 % )
( ) FREE FLOW ) PAGE 19 )
(A-6A AIRCRAFT )
(J52-P-8A ENGINE )
(FAR FIELD NOISE )
```



( FIGURE: SOUND PRESSURE LEVEL (SPL)  
 ( EQUAL LEVEL CONTOURS (DB)  
 ( 10 125 HZ OCTAVE BAND  
 ( NOISE SOURCE/SUBJECT:  
 ( OPERATION:  
 ( ( 75% RPM  
 ( A-6A AIRCRAFT  
 ( J52-P-8A ENGINE  
 ( FAR FIELD NOISE  
 ( METEOROLOGY:  
 ( TEMP = 15 C  
 ( BAR PRESS = .760 M HG  
 ( REL HUMID = 70 %  
 ( IDENTIFICATION:  
 ( OMEGA 1.4  
 ( TEST 75-002-003  
 ( RUN 02  
 ( 05 MAY 75  
 ( PAGE 20



AD-AU48 934

AEROSPACE MEDICAL RESEARCH LAB WRIGHT-PATTERSON AFB OHIO F/G 20/1  
USAF BIOENVIRONMENTAL NOISE DATA HANDBOOK. VOLUME 94. A-6A AIRC--ETC(U)  
JUN 77 R G POWELL

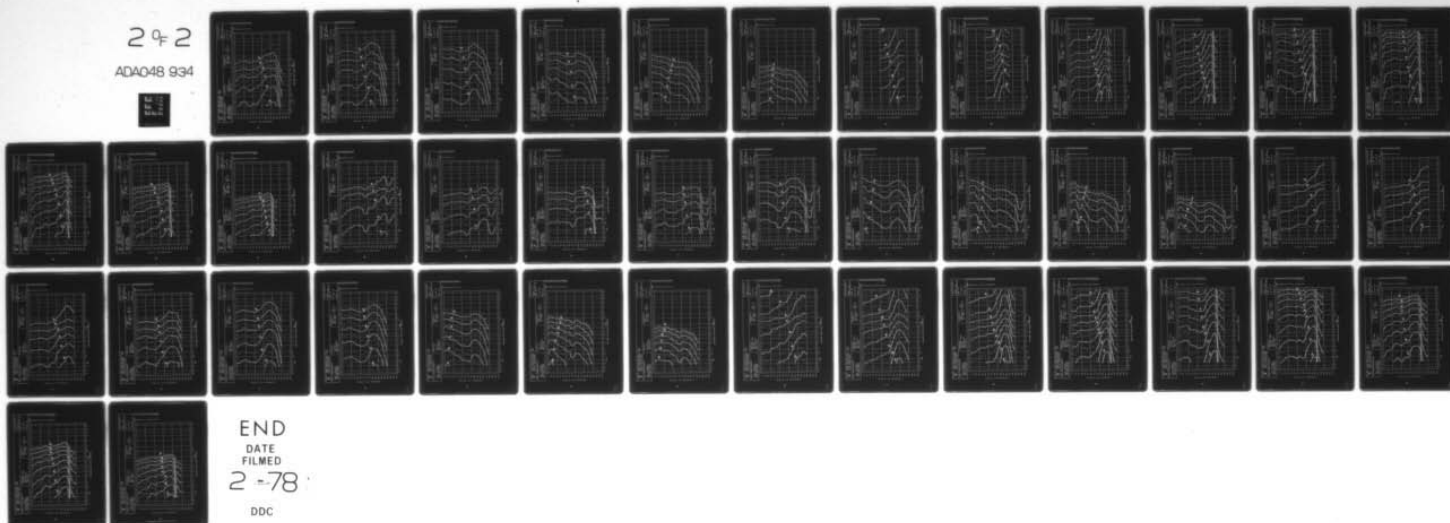
UNCLASSIFIED

AMRL-TR-75-50-VOL-94

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2 of 2

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DATE

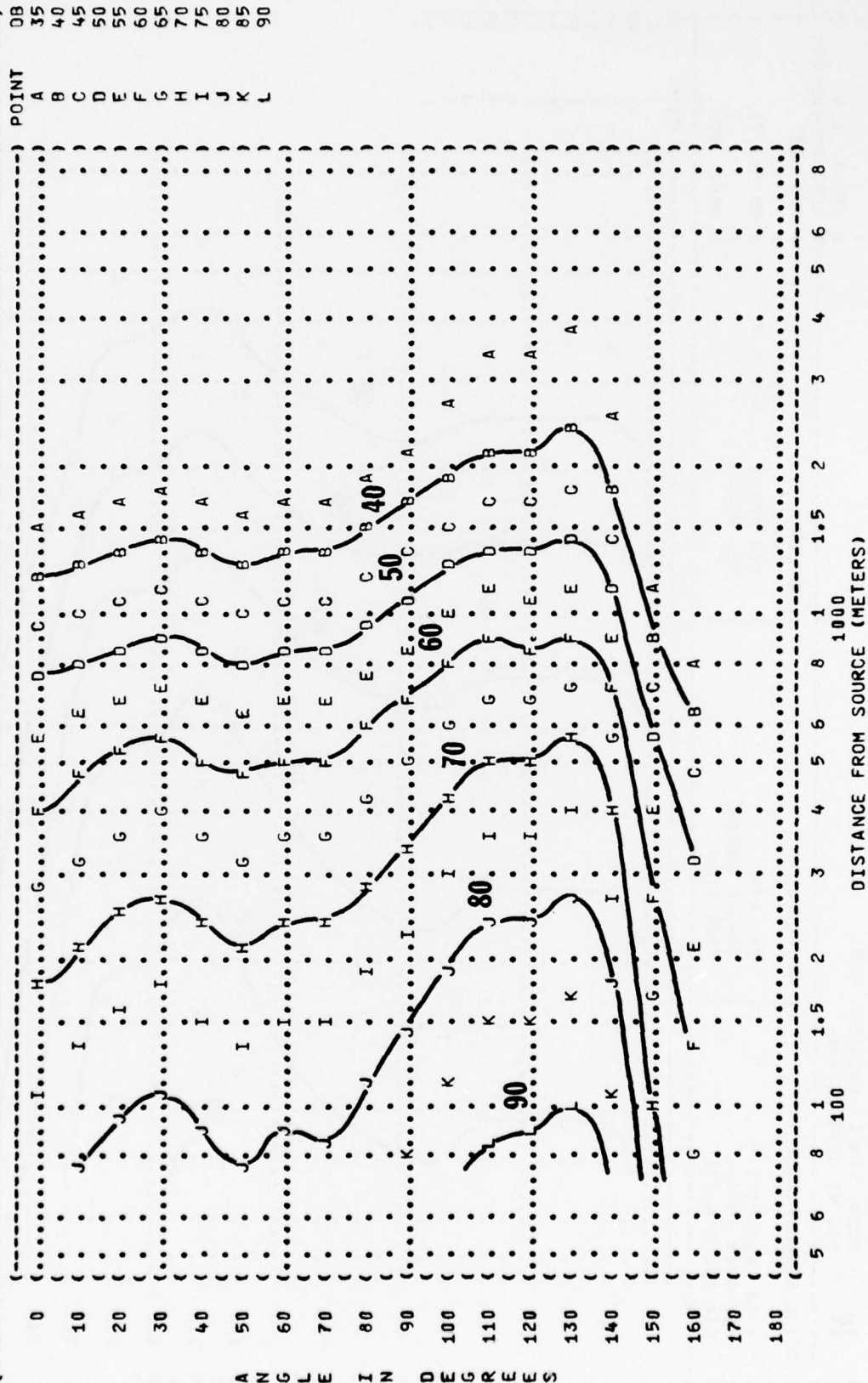
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( FIGURE: SOUND PRESSURE LEVEL (SPL)  
 ( EQUAL LEVEL CONTOURS (DB)  
 ( 10 250 HZ OCTAVE BAND  
 ( NOISE SOURCE/SUBJECT:  
 ( ( OPERATION:  
 ( ( 75% RPM  
 ( ( SINGLE ENGINE  
 ( ( FREE FLOW  
 ( A-6A AIRCRAFT  
 ( J52-P-8A ENGINE  
 ( FAR FIELD NOISE  
 ( METEOROLOGY:  
 ( TEMP = 15 C  
 ( BAR PRESS = .760 M HG  
 ( REL HUMID = 70 %  
 ( IDENTIFICATION:  
 ( OMEGA 1.4  
 ( TEST 75-002-003  
 ( RUN 02  
 ( 05 MAY 75  
 ( PAGE 21

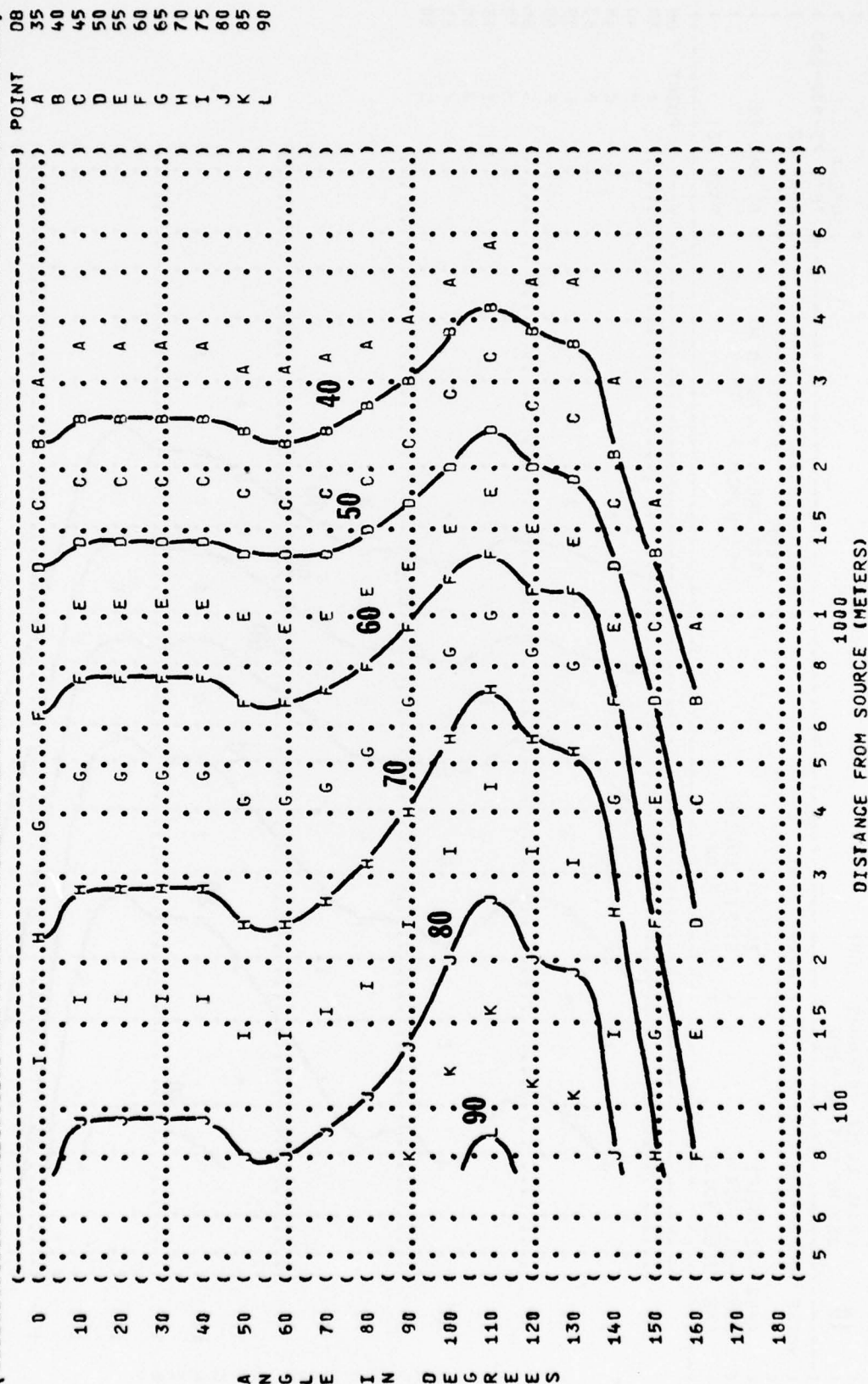


IDENTIFICATION:  
 OMEGA 1.4  
 TEST 75-002-003  
 RUN 02  
 05 MAY 75  
 PAGE 22

METEOROLOGY:  
 TEMP = 15 C  
 BAR PRESS = .760 M HG  
 REL HUMID = 70 %

OPERATION:  
 75% RPM  
 SINGLE ENGINE  
 FREE FLOW

NOISE SOURCE/SUBJECT:  
 A-6A AIRCRAFT  
 J52-P-8A ENGINE  
 FAR FIELD NOISE



### IDENTIFICATION:

10

1000 HZ OCTAVE BAND

NOISE SOURCE/SUBJECT:

## OPERATION:

## METEOROLOGY:

A-6A AIRCRAFT  
J52-P-8A ENGINE  
FAR FIELD NOISE

75% RPM  
SINGLE ENGINE  
FREE FLOW

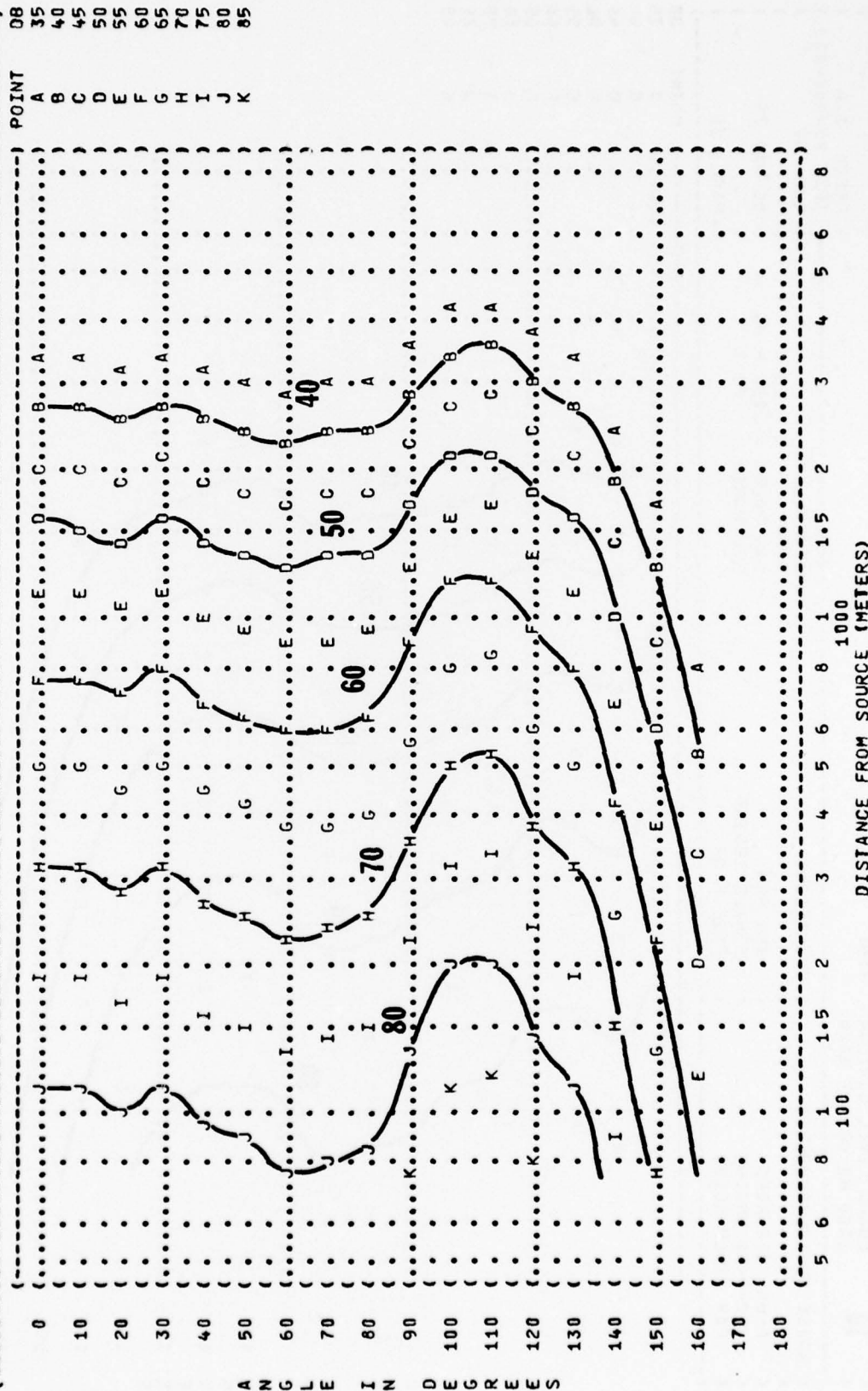
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BAR PRESS = .760 M HG  
REL HUMID = 70 %

OMEGA 1.4

TEST 75-002-003

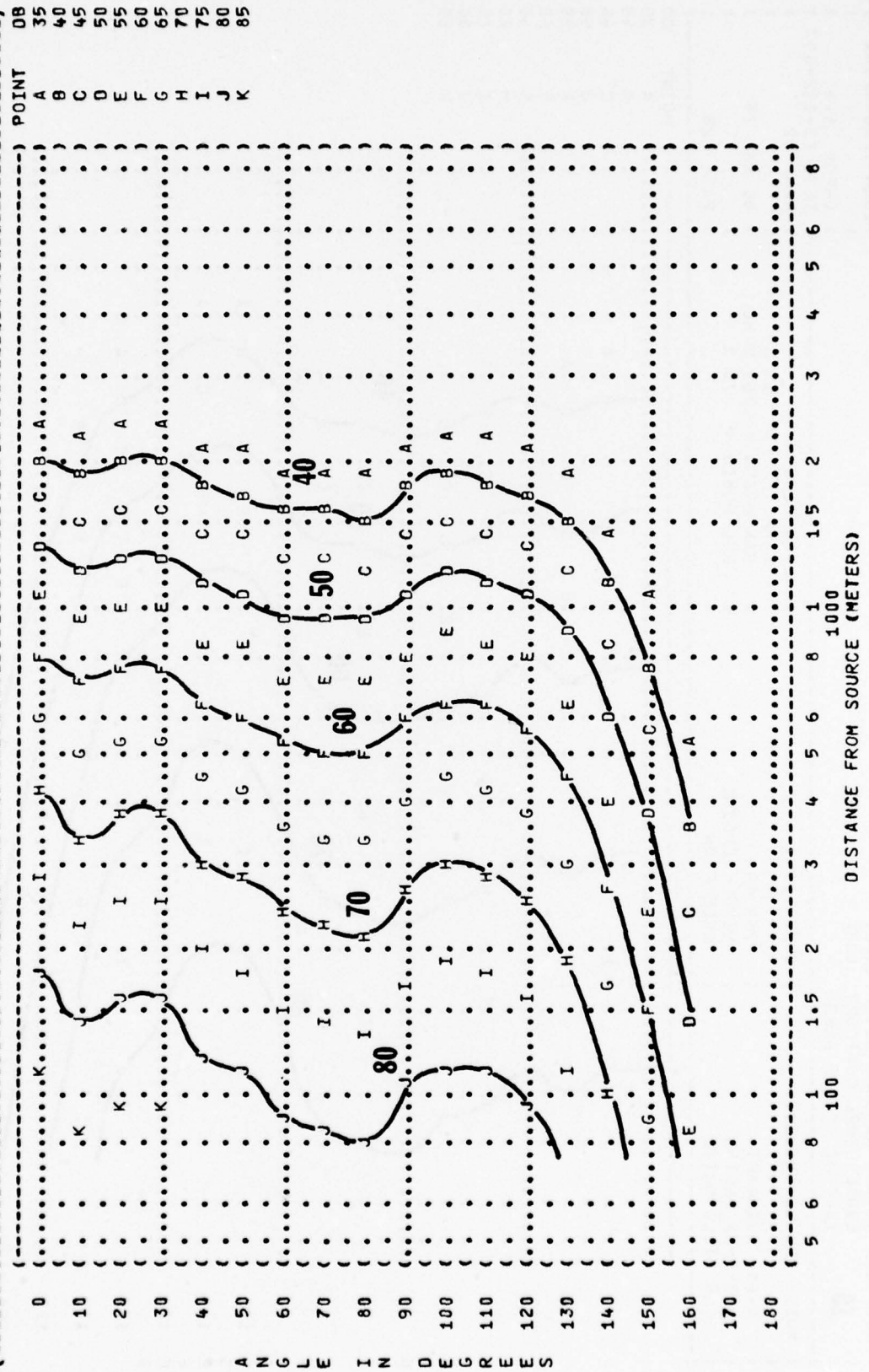
RUN 02

PAGE 23



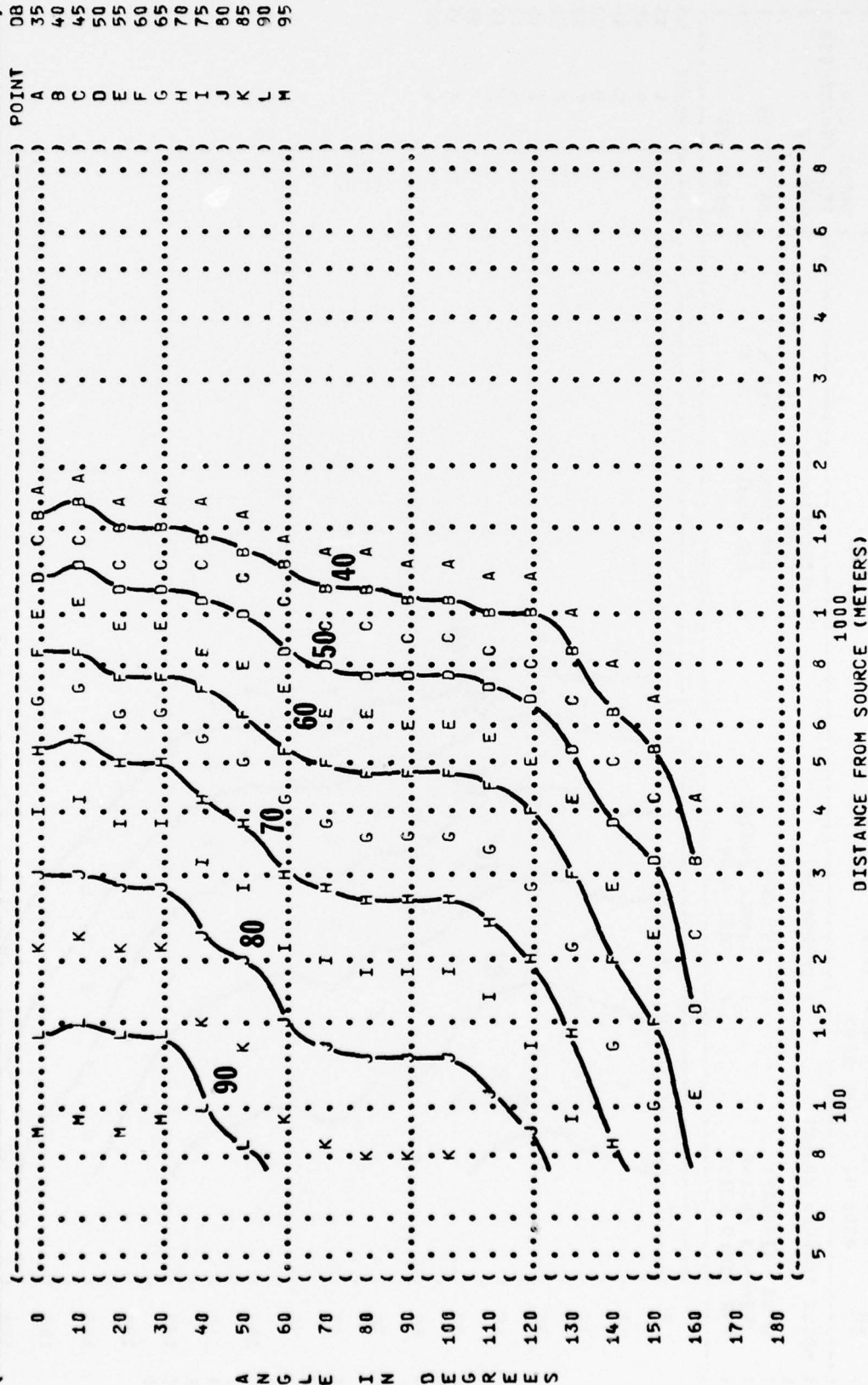


( FIGURE: SOUND PRESSURE LEVEL (SPL)  
 ( 10 EQUAL LEVEL CONTOURS (DB)  
 ( 2000 HZ OCTAVE BAND  
 ( NOISE SOURCE/SUBJECT: ( OPERATION:  
 ( A-6A AIRCRAFT ( 75% RPM  
 ( J52-P-8A ENGINE ( SINGLE ENGINE  
 ( FAR FIELD NOISE ( FREE FLOW  
 ( METEOROLOGY: TEMP = 15 C  
 ( BAR PRESS = .760 M HG  
 ( REL HUMID = 70 %  
 ( IDENTIFICATION:  
 ( OMEGA 1.4  
 ( TEST 75-002-003  
 ( RUN 02  
 ( 05 MAY 75  
 ( PAGE 24

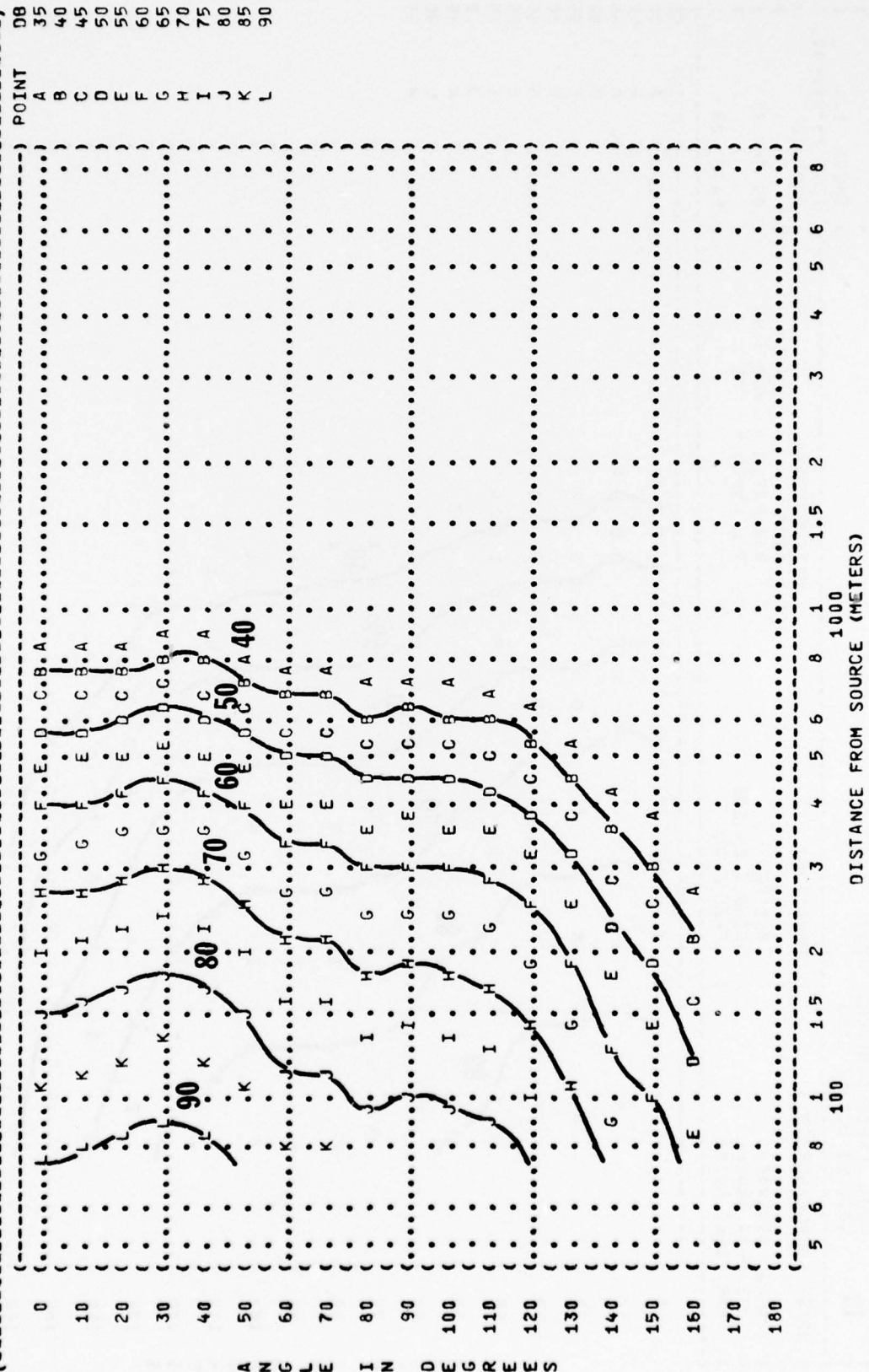




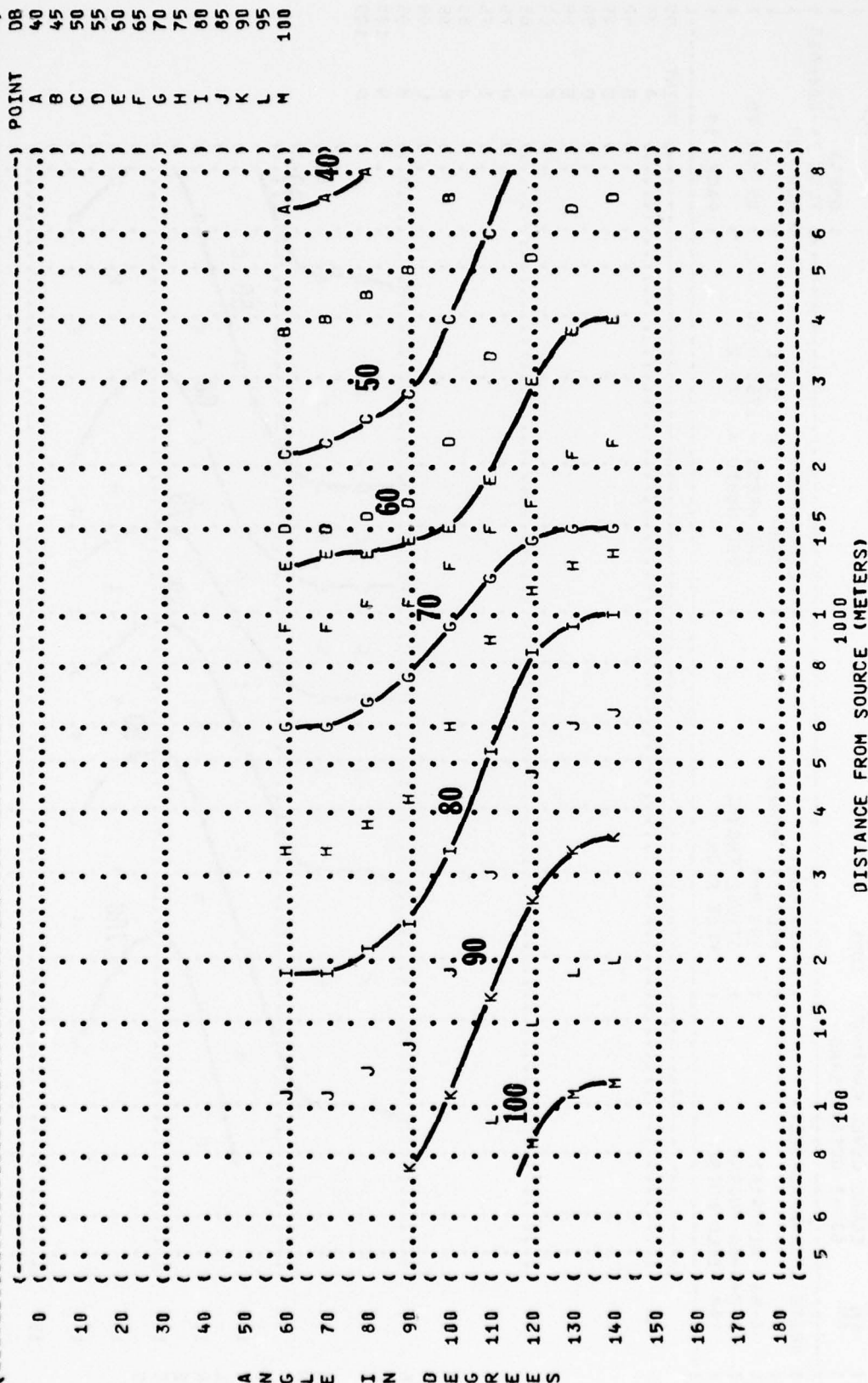
( ( FIGURE: SOUND PRESSURE LEVEL (SPL)  
 ( ( EQUAL LEVEL CONTOURS (DB)  
 ( ( 10 4000 HZ OCTAVE BAND  
 ( ( NOISE SOURCE/SUBJECT: ( OPERATION:  
 ( ( A-6A AIRCRAFT ( 75% RPM  
 ( ( J52-P-8A ENGINE ( SINGLE ENGINE  
 ( ( FAR FIELD NOISE ( FREE FLOW  
 ( ( METEOROLOGY: ( TEMP = 15 C  
 ( ( BAR PRESS = .760 M HG  
 ( ( REL HUMID = 70 %  
 ( ( IDENTIFICATION: ( OMEGA 1.4  
 ( ( TEST 75-002-003  
 ( ( RUN 02  
 ( ( 05 MAY 75  
 ( ( PAGE 25



( FIGURE: SOUND PRESSURE LEVEL (SPL)  
 ( EQUAL LEVEL CONTOURS (DB)  
 ( 10 8000 HZ OCTAVE BAND  
 ( NOISE SOURCE/SUBJECT: ( OPERATION:  
 ( ( ( ( ( METEOROLOGY:  
 ( A-6A AIRCRAFT ( 75% RPM ( TEMP = 15 C  
 ( J52-P-8A ENGINE ( SINGLE ENGINE ( BAR PRESS = .760 M HG  
 ( FAR FIELD NOISE ( FREE FLOW ( REL HUMID = 70 %  
 ( ( ( ( ( PAGE 26  
 ( IDENTIFICATION: ( ( ( OMEGA 1.4  
 ( ( ( ( ( TEST 75-002-003  
 ( ( ( ( ( RUN 02  
 ( ( ( ( ( 05 MAY 75  
 ( ( ( ( (

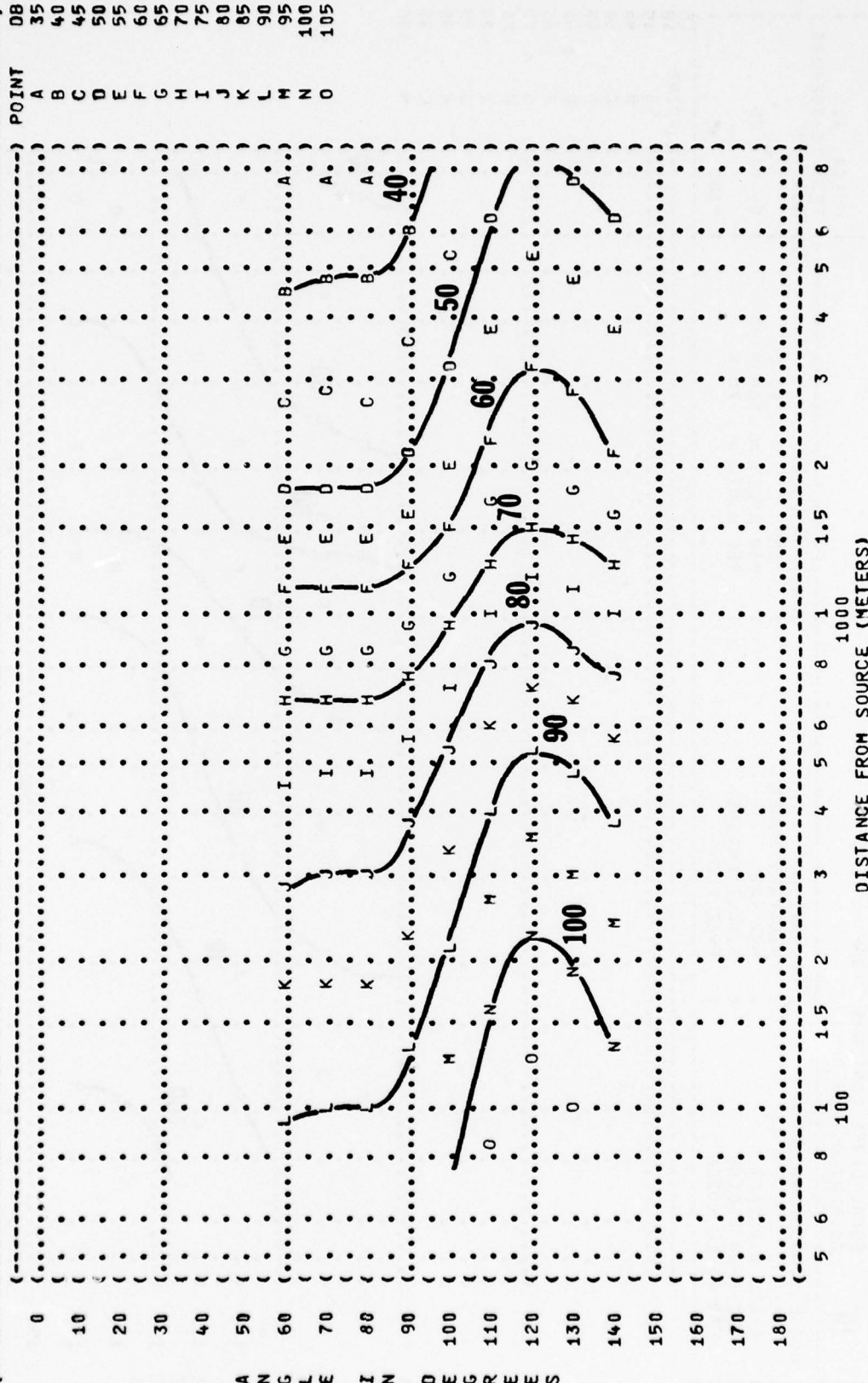


( FIGURE: SOUND PRESSURE LEVEL (SPL)  
 ( EQUAL LEVEL CONTOURS (DB)  
 ( 10 31.5 HZ OCTAVE BAND  
 ( NOISE SOURCE/SUBJECT: ( OPERATION:  
 ( A-6A AIRCRAFT ( MILITARY POWER  
 ( J52-P-8A ENGINE ( 99% RPM  
 ( FAR FIELD NOISE ( SINGLE ENGINE  
 ( ( FREE FLOW  
 ( METEOROLOGY:  
 ( TEMP = 15 C  
 ( BAR PRESS = .760 M HG  
 ( REL HUMID = 70 %  
 ( IDENTIFICATION:  
 ( OMEGA 1.4  
 ( TEST 75-002-003  
 ( RUN 03  
 ( 05 MAY 75  
 ( PAGE 18



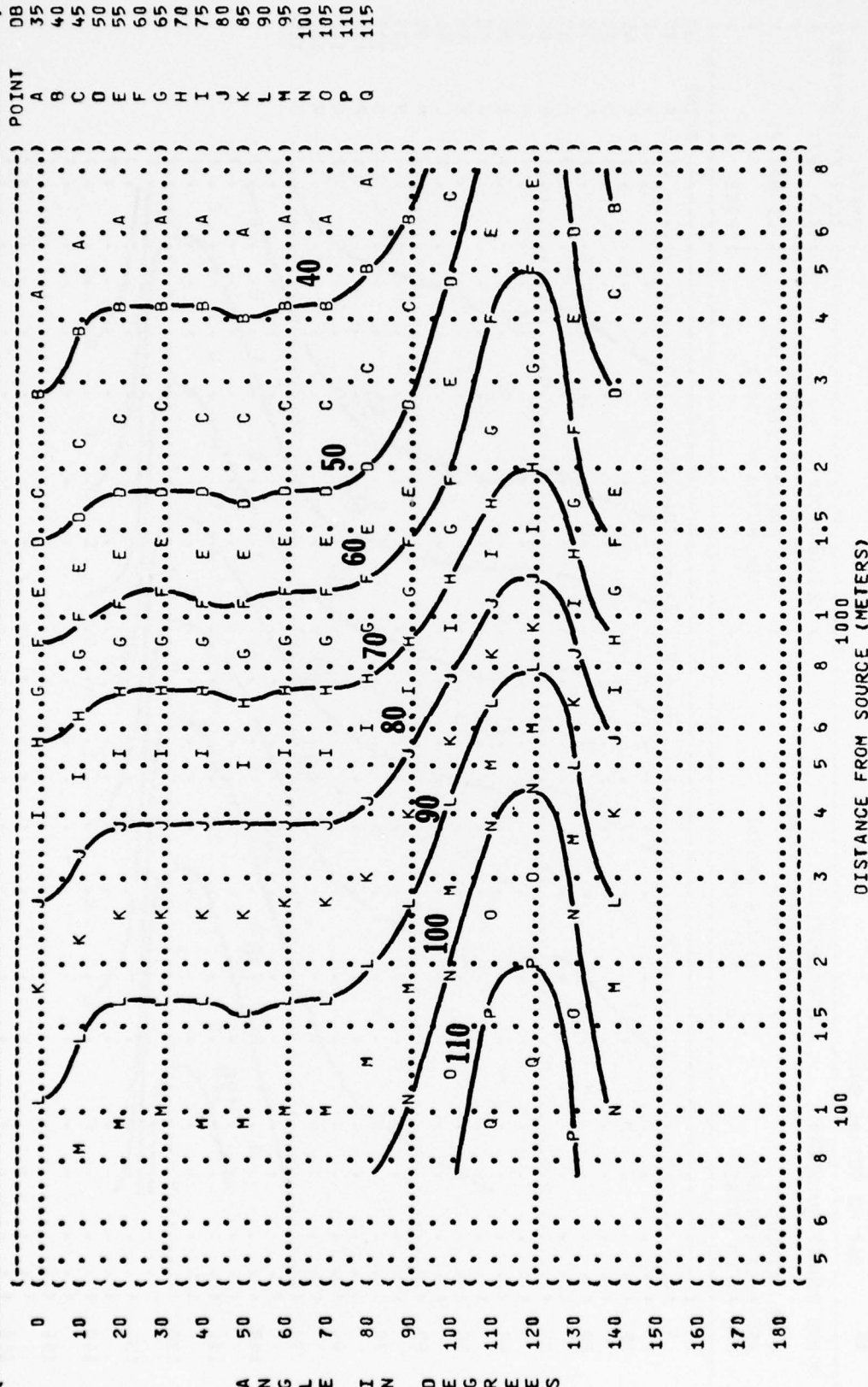


IDENTIFICATION:  
 OMEGA 1.4  
 TEST 75-002-003  
 RUN 03  
 METEOROLOGY:  
 TEMP = 15 C  
 BAR PRESS = .760 M HG  
 REL HUMID = 70 %  
 OPERATION:  
 MILITARY POWER  
 99% RPM  
 SINGLE ENGINE  
 FREE FLOW  
 NOISE SOURCE/SUBJECT:  
 A-6A AIRCRAFT  
 J52-P-8A ENGINE  
 FAR FIELD NOISE

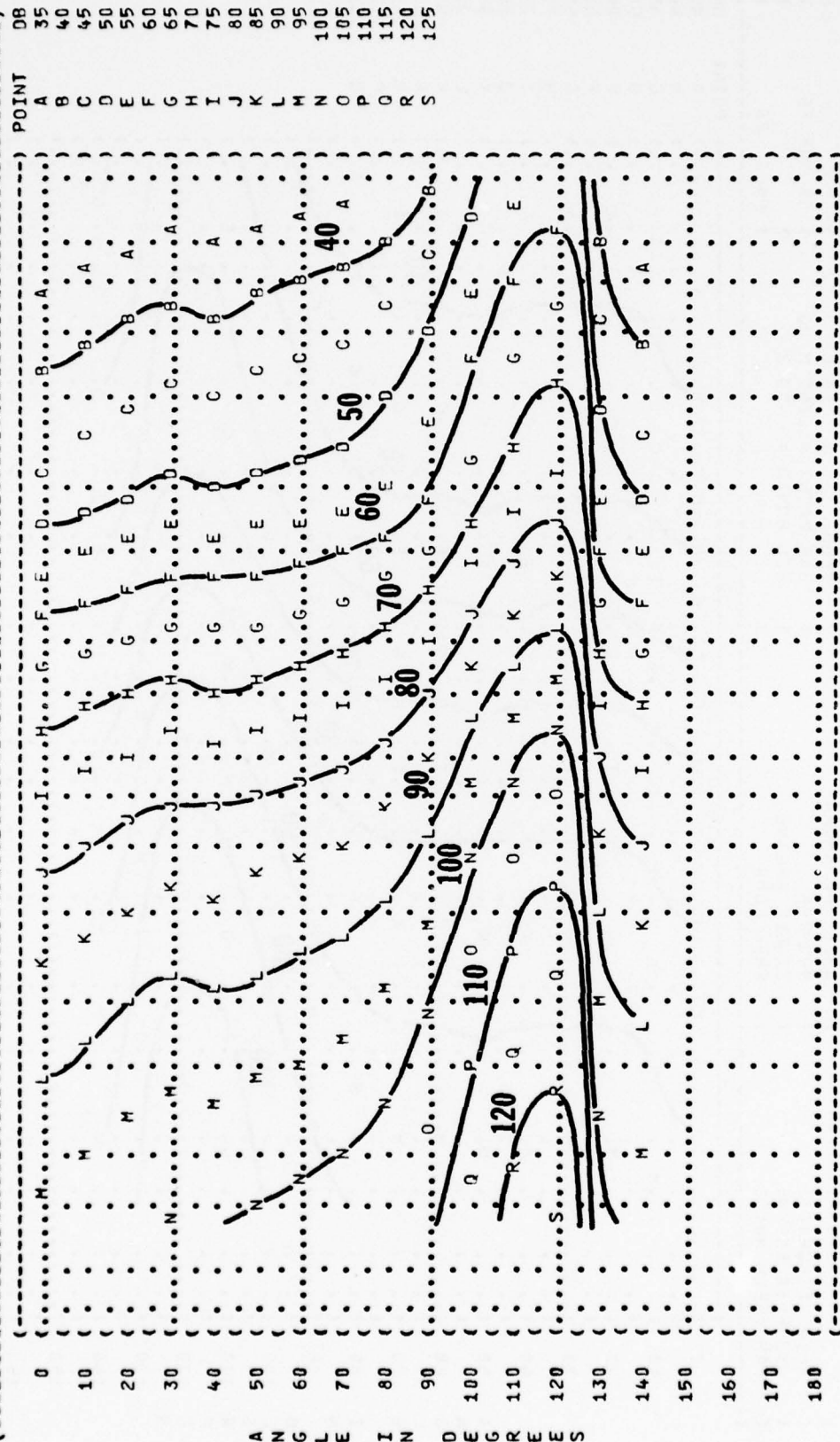




( FIGURE: SOUND PRESSURE LEVEL (SPL)  
 ( EQUAL LEVEL CONTOURS (DB)  
 ( 10 125 HZ OCTAVE BAND  
 ( NOISE SOURCE/SUBJECT: ( OPERATION: ) METEOROLOGY: )  
 ( A-6A AIRCRAFT ( MILITARY POWER ) )  
 ( J52-P-8A ENGINE ( 99% RPM ) )  
 ( FAR FIELD NOISE ( SINGLE ENGINE ) )  
 ( ( FREE FLOW ) )  
 ( ) TEMP = 15 C  
 ( ) BAR PRESS = .760 M HG  
 ( ) REL HUMID = 70 %  
 ( ) PAGE 20  
 ( IDENTIFICATION: )  
 ( ) OMEGA 1.4  
 ( TEST 75-002-003 )  
 ( RUN 03 )



( FIGURE: SOUND PRESSURE LEVEL (SPL)  
 ( 10 EQUAL LEVEL CONTOURS (DB)  
 ( 250 HZ OCTAVE BAND  
 ( NOISE SOURCE/SUBJECT:  
 ( OPERATION:  
 ( MILITARY POWER  
 ( 99% RPM  
 ( SINGLE ENGINE  
 ( FREE FLOW  
 ( A-6A AIRCRAFT  
 ( J52-P-8A ENGINE  
 ( FAR FIELD NOISE  
 ( METEOROLOGY:  
 ( TEMP = 15 C  
 ( BAR PRESS = .760 M HG  
 ( REL HUMID = 70 %  
 ( IDENTIFICATION:  
 ( OMEGA 1.4  
 ( TEST 75-002-003  
 ( RUN 03  
 ( 05 MAY 75  
 ( PAGE 21

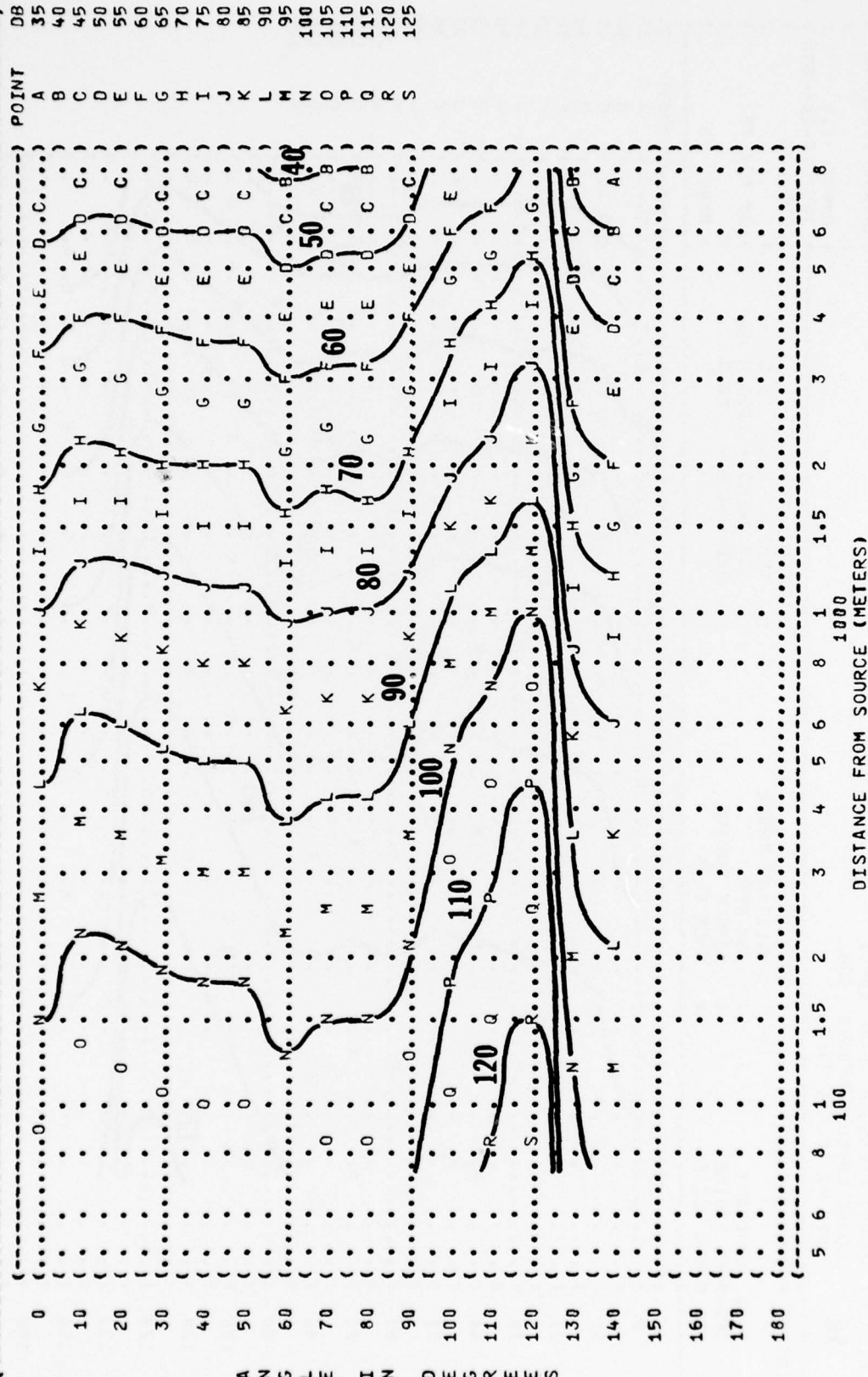


DB  
 35  
 40  
 45  
 50  
 55  
 60  
 65  
 70  
 75  
 80  
 85  
 90  
 95  
 100  
 105  
 110  
 115  
 120  
 125  
 POINT  
 A  
 B  
 C  
 D  
 E  
 F  
 G  
 H  
 I  
 J  
 K  
 L  
 M  
 N  
 O  
 P  
 Q  
 R  
 S

0  
 10  
 20  
 30  
 40  
 50  
 60  
 70  
 80  
 90  
 100  
 110  
 120  
 130  
 140  
 150  
 160  
 170  
 180

DISTANCE FROM SOURCE (METERS)

( FIGURE: SOUND PRESSURE LEVEL (SPL)  
 ( EQUAL LEVEL CONTOURS (DB)  
 ( 10 500 HZ OCTAVE BAND  
 ( NOISE SOURCE/SUBJECT: ( OPERATION: ( METEOROLOGY: ( IDENTIFICATION: ( )  
 ( A-6A AIRCRAFT ( MILITARY POWER ( ) OMEGA 1.4  
 ( J52-P-8A ENGINE ( 99% RPM ( ) TEST 75-002-003  
 ( FAR FIELD NOISE ( SINGLE ENGINE ( ) RUN 03  
 ( ) FREE FLOW ( ) 05 MAY 75  
 ( ) ( ) REL HUMID = 70 %  
 ( ) ( ) PAGE 22





```
IDENTIFICATION:
) )
) ) OMEGA 1.4
) ) TEST 75-002-003
) ) RUN 03
) )
) ) 05 MAY 75
) )
) ) PAGE 23
```

) RUN 03 )  
 ) ) )  
 ) 05 MAY 75 )  
 ) ) )  
 ) PAGE 23 )

METEOROLOGY:      = 15 C  
TEMP                    = .760 M HG  
BAR PRESS            = 70 %  
REL HUMID

( OPERATION:  
( MILITARY POWER  
( 99% RPM  
( SINGLE ENGINE  
( FREE FLOW

NOISE SOURCE/SUBJECT:

A-6A AIRCRAFT  
J52-P-8A ENGINE  
FAR FIELD NOISE

POINT DB

-----)

.....

.....

.....

.....

.....

.....

.....

.....

(- - -)

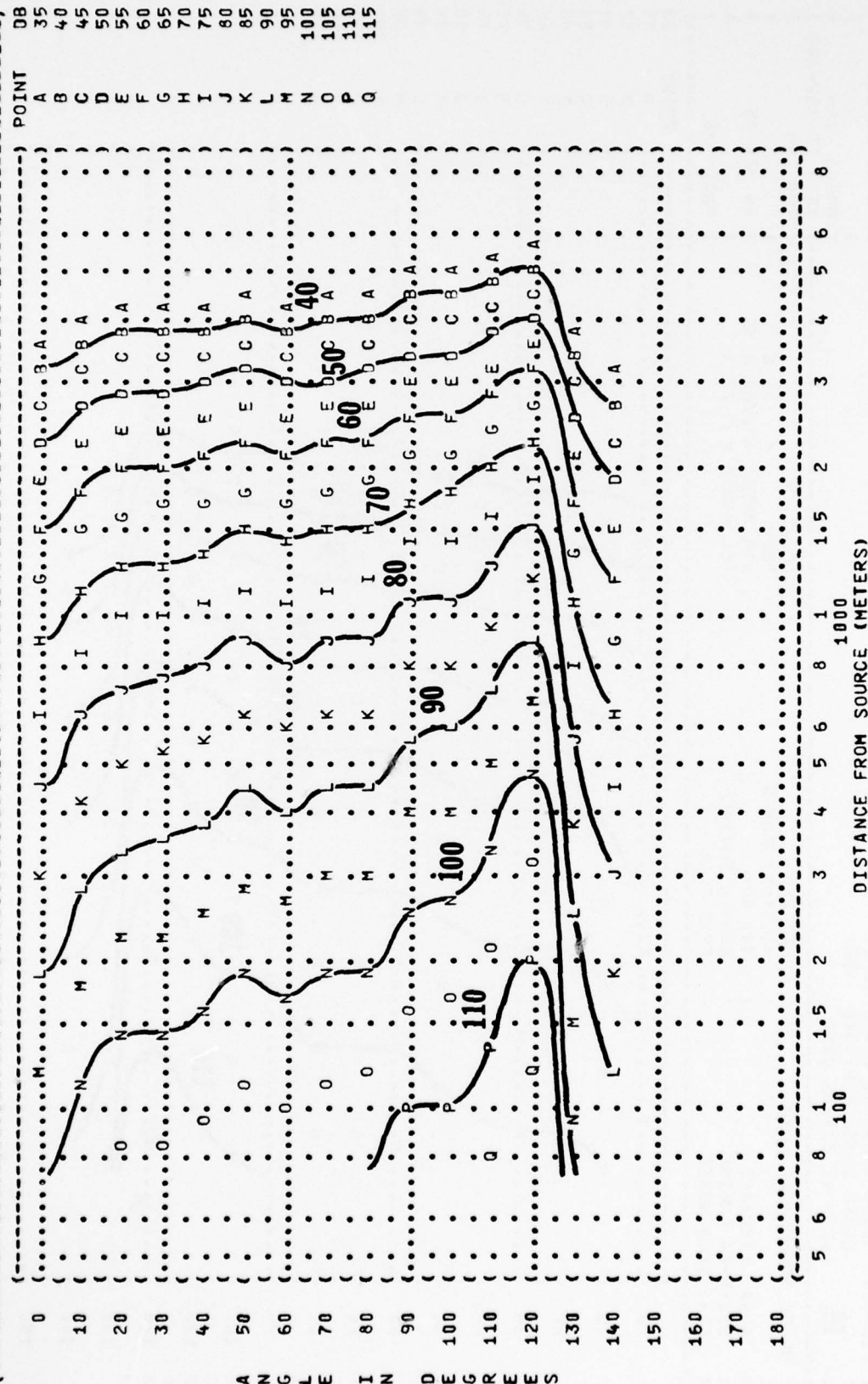
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DISTANCE FROM SOURCE (METERS)

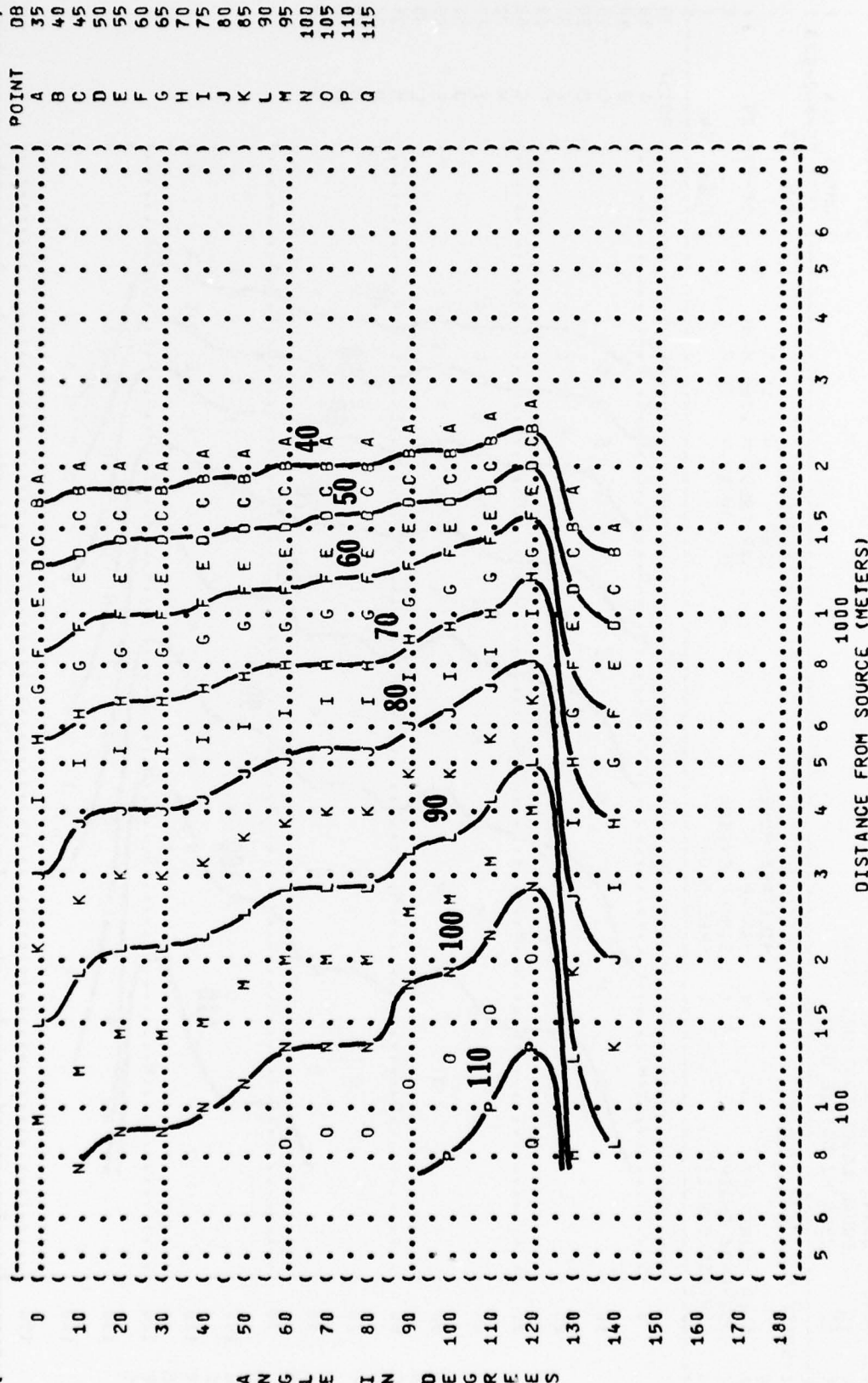
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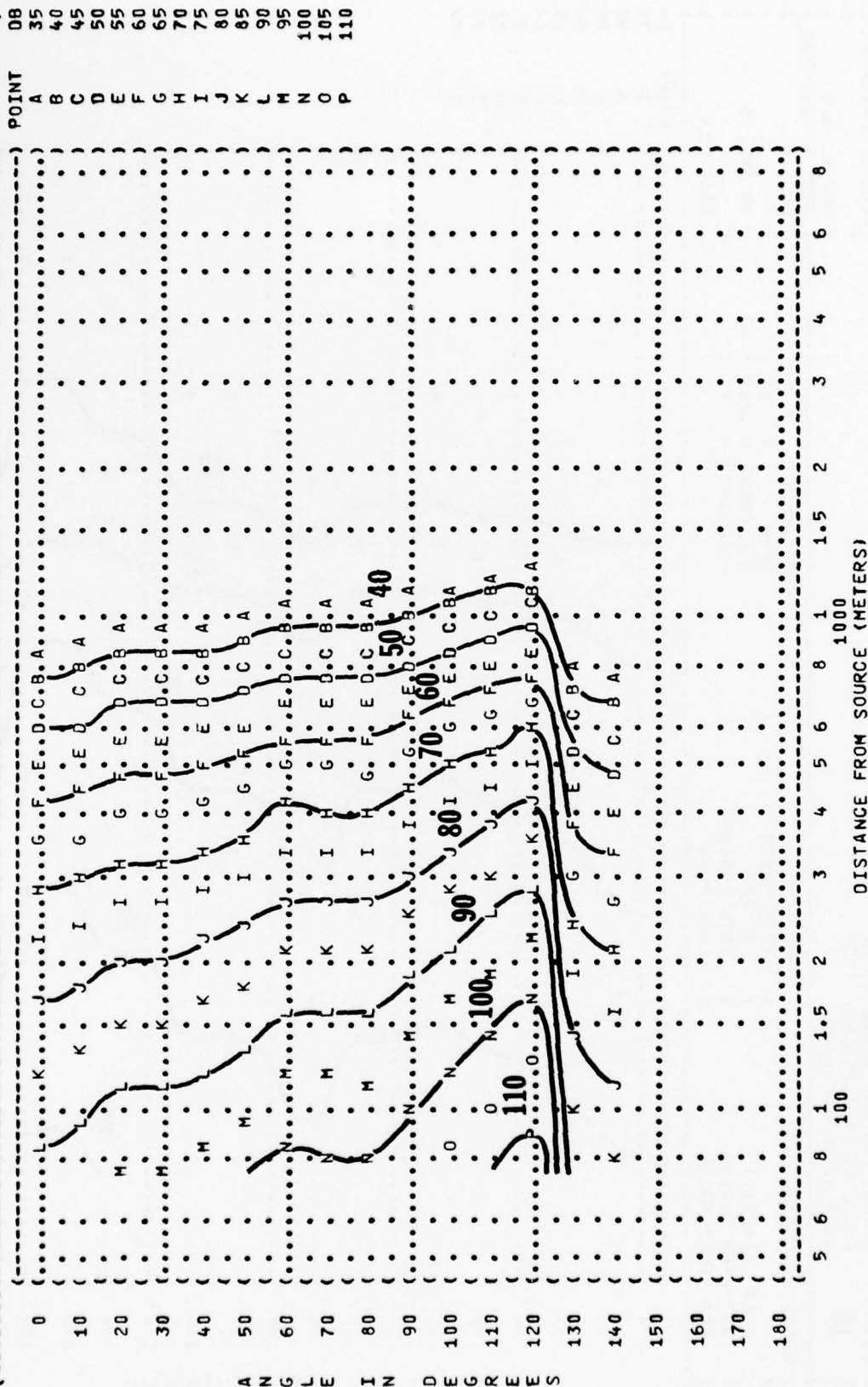
( FIGURE: SOUND PRESSURE LEVEL (SPL)  
 ( 10 EQUAL LEVEL CONTOURS (DB)  
 ( 2000 HZ OCTAVE BAND  
 ( NOISE SOURCE/SUBJECT: ( OPERATION:  
 ( A-6A AIRCRAFT ( MILITARY POWER  
 ( J52-P-8A ENGINE ( 99% RPM  
 ( FAR FIELD NOISE ( SINGLE ENGINE  
 ( ( FREE FLOW  
 ( METEOROLOGY:  
 ( TEMP = 15 C  
 ( BAR PRESS = .760 M HG  
 ( REL HUMID = 70 %  
 ( PAGE 24  
 ( IDENTIFICATION:  
 ( OMEGA 1.4  
 ( TEST 75-002-003  
 ( RUN 03  
 ( 05 MAY 75  
 (



( FIGURE: SOUND PRESSURE LEVEL (SPL)  
 ( EQUAL LEVEL CONTOURS (DB)  
 ( 10 4000 HZ OCTAVE BAND  
 ( NOISE SOURCE/SUBJECT: ( OPERATION:  
 ( A-6A AIRCRAFT ( MILITARY POWER  
 ( J52-P-8A ENGINE ( 99% RPM  
 ( FAR FIELD NOISE ( SINGLE ENGINE  
 ( ( FREE FLOW  
 ( METEOROLOGY:  
 ( TEMP = 15 C  
 ( BAR PRESS = .760 M HG  
 ( REL HUMID = 70 %  
 ( PAGE 25  
 ( IDENTIFICATION:  
 ( OMEGA 1.4  
 ( TEST 75-002-003  
 ( RUN 03  
 ( 05 MAY 75  
 (

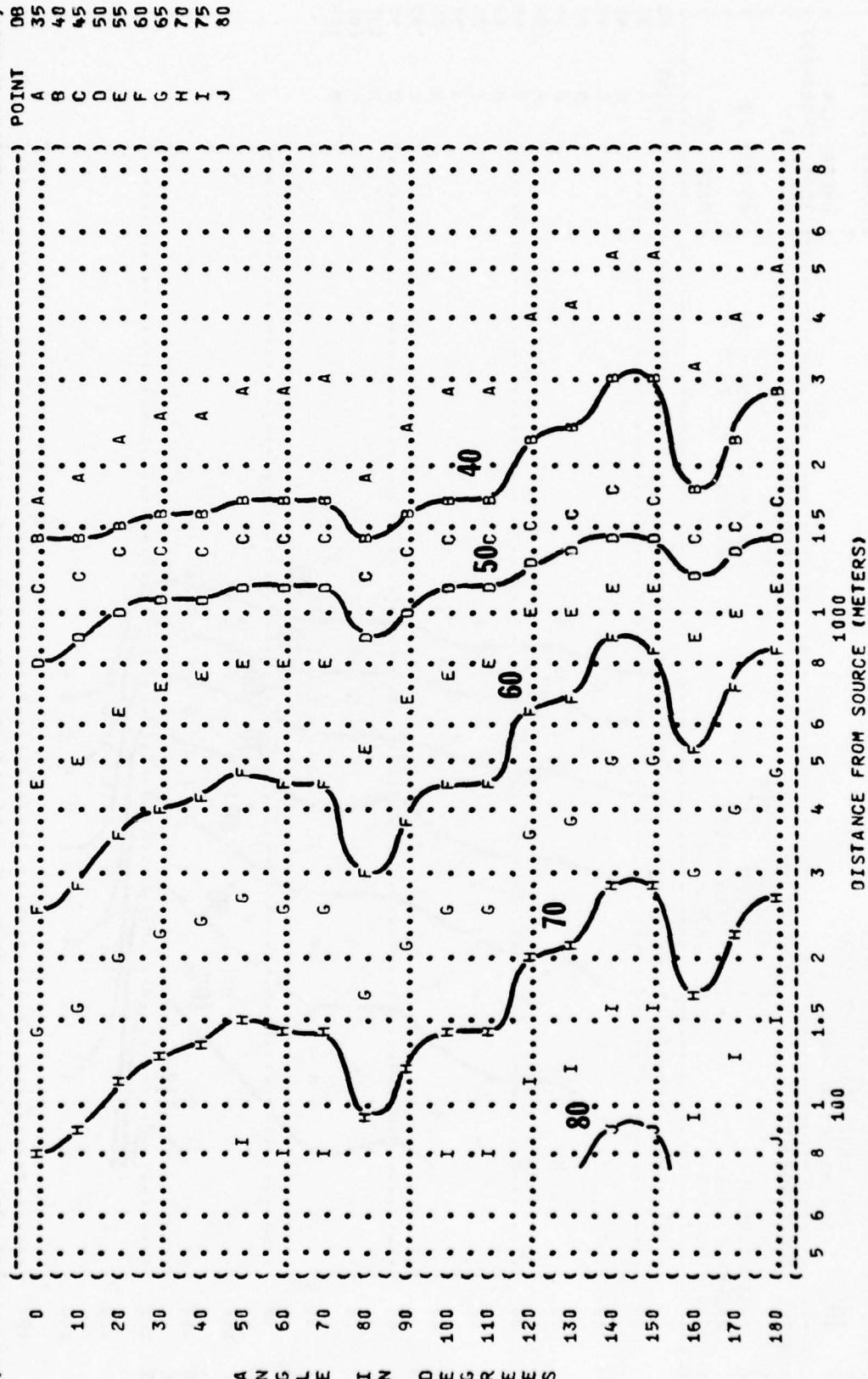


( FIGURE: SOUND PRESSURE LEVEL (SPL)  
 ( 10 EQUAL LEVEL CONTOURS (DB)  
 ( 8000 HZ OCTAVE BAND  
 ( NOISE SOURCE/SUBJECT: ( OPERATION:  
 ( A-6A AIRCRAFT ( MILITARY POWER  
 ( J52-P-8A ENGINE ( 99% RPM  
 ( FAR FIELD NOISE ( SINGLE ENGINE  
 ( ( FREE FLOW  
 ( METEOROLOGY:  
 ( TEMP = 15 C  
 ( BAR PRESS = .760 M HG  
 ( REL HUMID = 70 %  
 ( IDENTIFICATION:  
 ( OMEGA 1.4  
 ( TEST 75-002-003  
 ( RUN 03  
 ( 05 MAY 75  
 ( PAGE 26



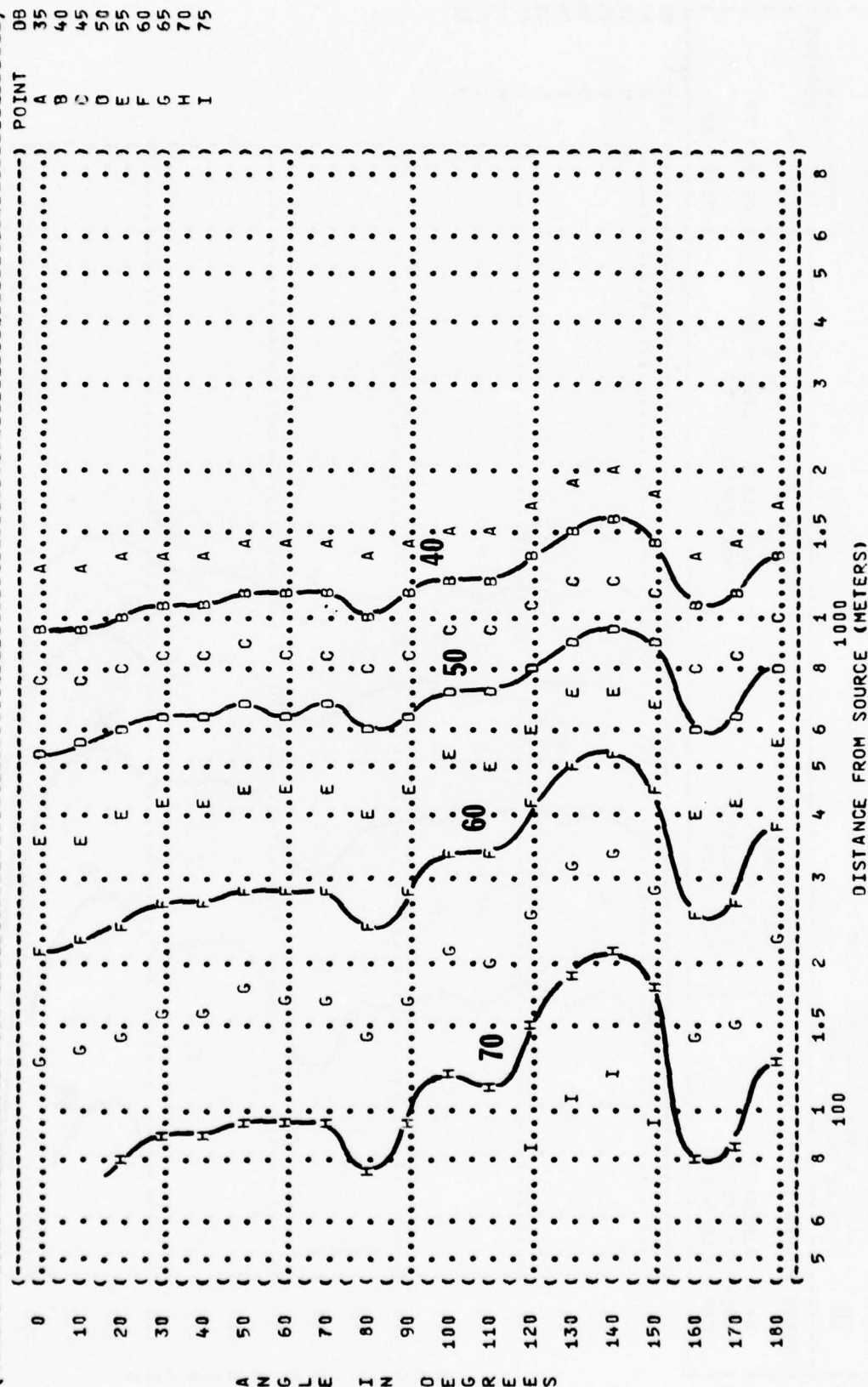


( ( FIGURE: SOUND PRESSURE LEVEL (SPL)  
 ( ( 10 EQUAL LEVEL CONTOURS (DB)  
 ( ( 31.5 HZ OCTAVE BAND  
 ( ( NOISE SOURCE/SUBJECT:  
 ( ( OPERATION:  
 ( ( A-6A AIRCRAFT  
 ( ( J52-P-8A ENGINE  
 ( ( FAR FIELD NOISE  
 ( ( METEOROLOGY:  
 ( ( TEMP = 15 C  
 ( ( BAR PRESS = .760 M HG  
 ( ( REL HUMID = 70 %  
 ( ( IDENTIFICATION:  
 ( ( OMEGA 1.4  
 ( ( TEST 75-002-003  
 ( ( RUN 04  
 ( ( 05 MAY 75  
 ( ( PAGE 18





( FIGURE: SOUND PRESSURE LEVEL (SPL)  
 ( EQUAL LEVEL CONTOURS (DB)  
 ( 10 63 HZ OCTAVE BAND  
 ( NOISE SOURCE/SUBJECT:  
 ( ( OPERATION:  
 ( ( IDLE POWER  
 ( ( 60% RPM  
 ( ( BOTH ENGINES  
 ( ( FREE FLOW  
 ( METEOROLOGY:  
 ( TEMP = 15 C  
 ( BAR PRESS = .760 M HG  
 ( REL HUMID = 70 %  
 ( PAGE 19  
 ( IDENTIFICATION:  
 ( OMEGA 1.4  
 ( TEST 75-002-003  
 ( RUN 04  
 ( 05 MAY 75  
 ( )



( FIGURE: SOUND PRESSURE LEVEL (SPL)  
 ( EQUAL LEVEL CONTOURS (DB)  
 ( 10 125 HZ OCTAVE BAND  
 ( NOISE SOURCE/SUBJECT:  
 ( ( OPERATION:  
 ( ( IDLE POWER  
 ( ( 60% RPM  
 ( ( BOTH ENGINES  
 ( ( FREE FLOW  
 ( A-6A AIRCRAFT  
 ( J52-P-8A ENGINE  
 ( FAR FIELD NOISE  
 ( METEOROLOGY:  
 ( TEMP = 15 C  
 ( BAR PRESS = .760 M HG  
 ( REL HUMID = 70 %  
 ( IDENTIFICATION:  
 ( OMEGA 1.4  
 ( TEST 75-002-003  
 ( RUN 04  
 ( 05 MAY 75  
 ( PAGE 20

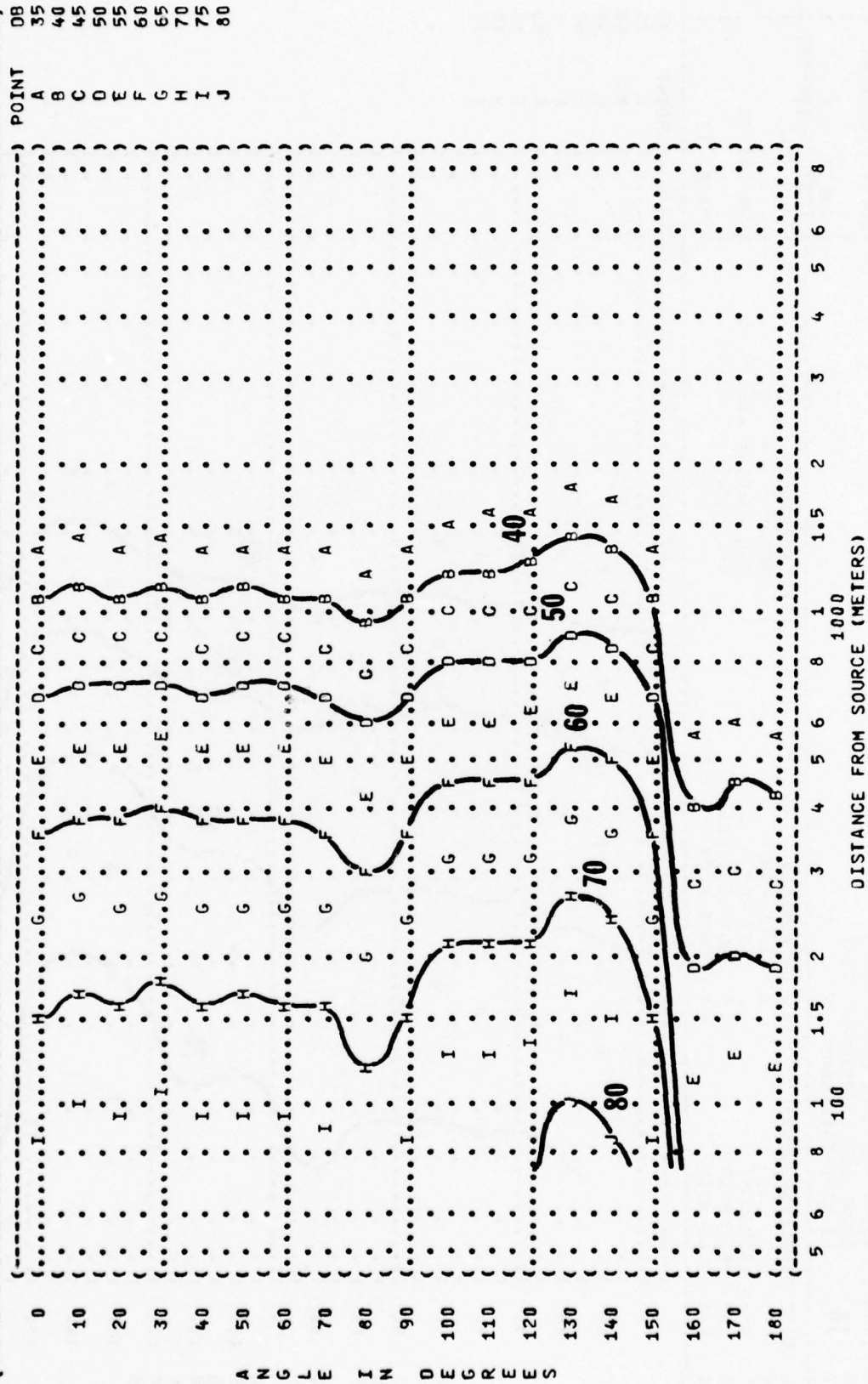


FIGURE: SOUND PRESSURE LEVEL (SPL)  
 EQUAL LEVEL CONTOURS (DB)  
 250 HZ OCTAVE BAND

IDENTIFICATION:  
 OMEGA 1.4  
 TEST 75-002-003  
 RUN 04  
 05 MAY 75  
 PAGE 21

NOISE SOURCE/SUBJECT:  
 A-6A AIRCRAFT  
 J52-P-8A ENGINE  
 FAR FIELD NOISE

OPERATION:  
 IDLE POWER  
 60% RPM  
 BOTH ENGINES  
 FREE FLOW

METEOROLOGY:  
 TEMP = 15 C  
 BAR PRESS = 760 M HG  
 REL HUMID = 70 %

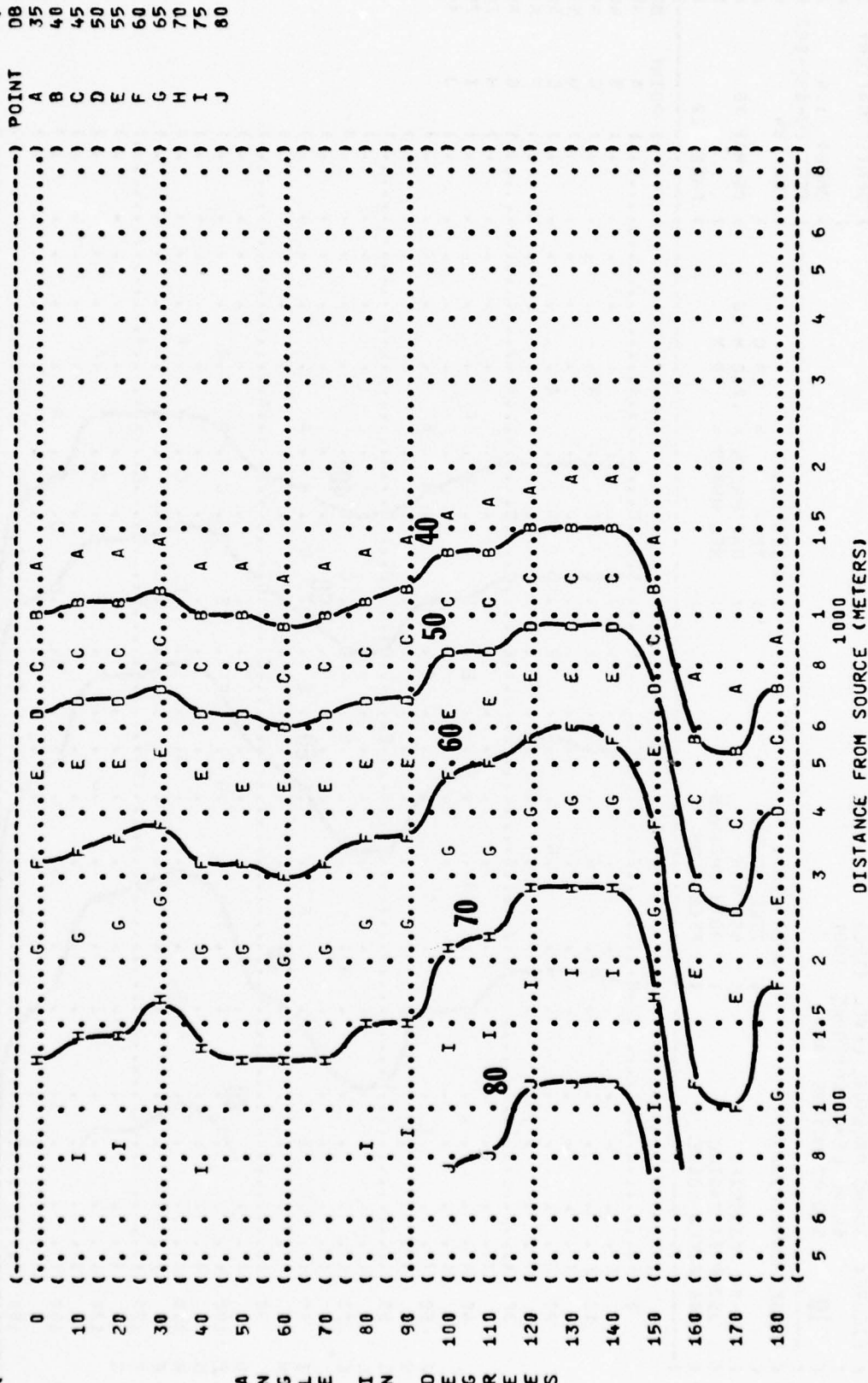
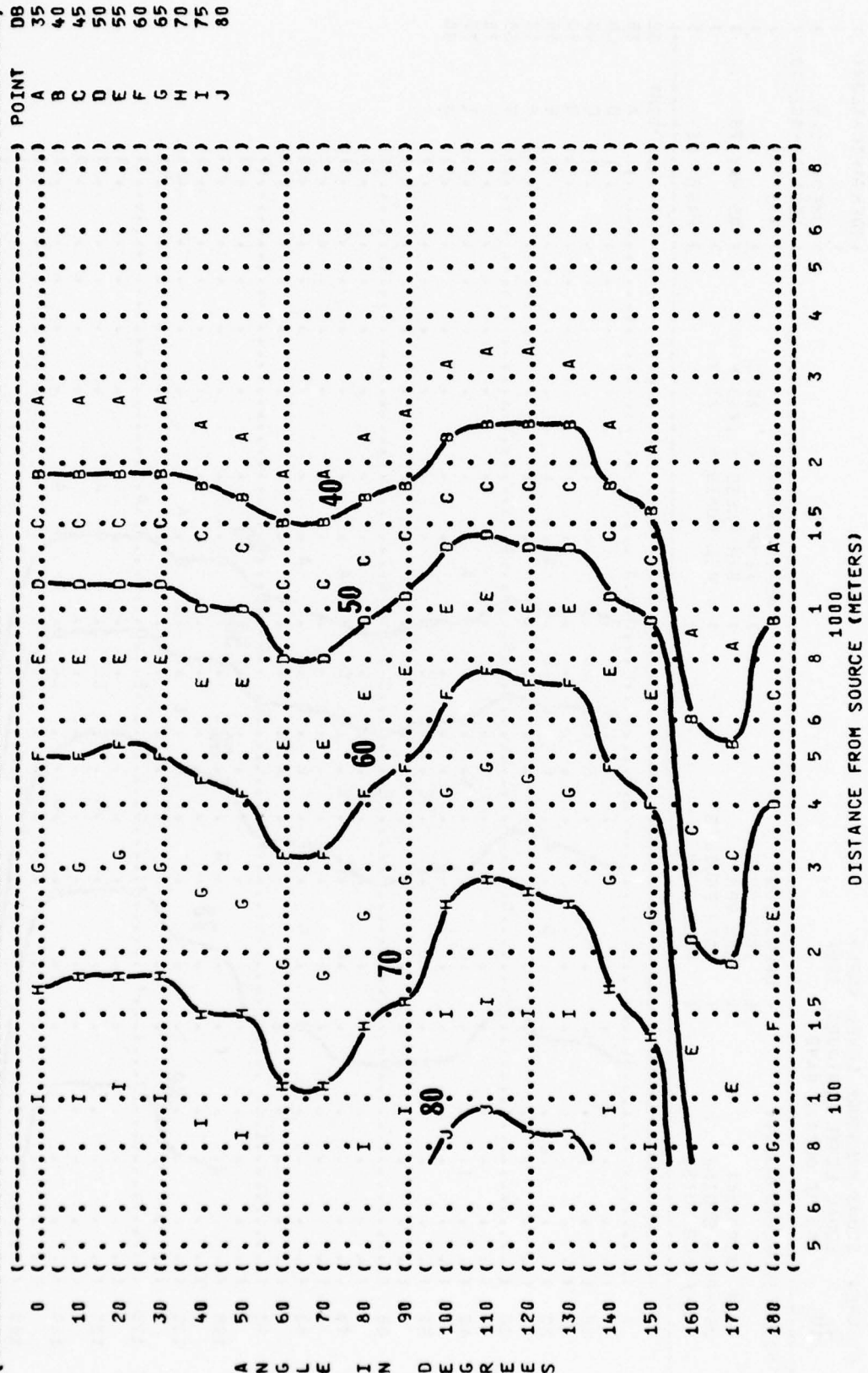




FIGURE 1: SOUND PRESSURE LEVEL (SPL)  
EQUAL LEVEL CONTOURS (DB)  
500 HZ OCTAVE BAND

10

NOISE SOURCE/SUBJECT: ( ) OPERATION: ( ) METEOROLOGY: ( ) IDENTIFICATION: ( )  
( ) A-6A AIRCRAFT ( ) IDLE POWER ( ) TEMP = 15 C ( ) OMEGA 1.4  
( ) J52-P-8A ENGINE ( ) 60% RPM ( ) BAR PRESS = .760 M HG ( ) TEST 75-002-003  
( ) FAR FIELD NOISE ( ) BOTH ENGINES ( ) REL HUMID = 70 % ( ) RUN 04  
( ) FREE FLOW ( ) 05 MAY 75 ( ) PAGE 22





DB POINT

35 A  
40 B  
45 C  
50 D  
55 E  
60 F  
65 G  
70 H  
75 I  
80 J

0  
10  
20  
30  
40

80  
70  
60  
50  
40

DB POINT

FIGURE: SOUND PRESSURE LEVEL (SPL)  
 10 EQUAL LEVEL CONTOURS (DB)  
 2000 HZ OCTAVE BAND

NOISE SOURCE/SUBJECT: OPERATION:  
 ( ) IDLE POWER  
 ( ) 60% RPM  
 ( ) BOTH ENGINES  
 ( ) FREE FLOW

METEOROLOGY:  
 ( ) TEMP = 15 C  
 ( ) BAR PRESS = .760 M HG  
 ( ) REL HUMID = 70 %

IDENTIFICATION:  
 ( ) OMEGA 1.4  
 ( ) TEST 75-002-003  
 ( ) RUN 04  
 ( ) 05 MAY 75  
 ( ) PAGE 24

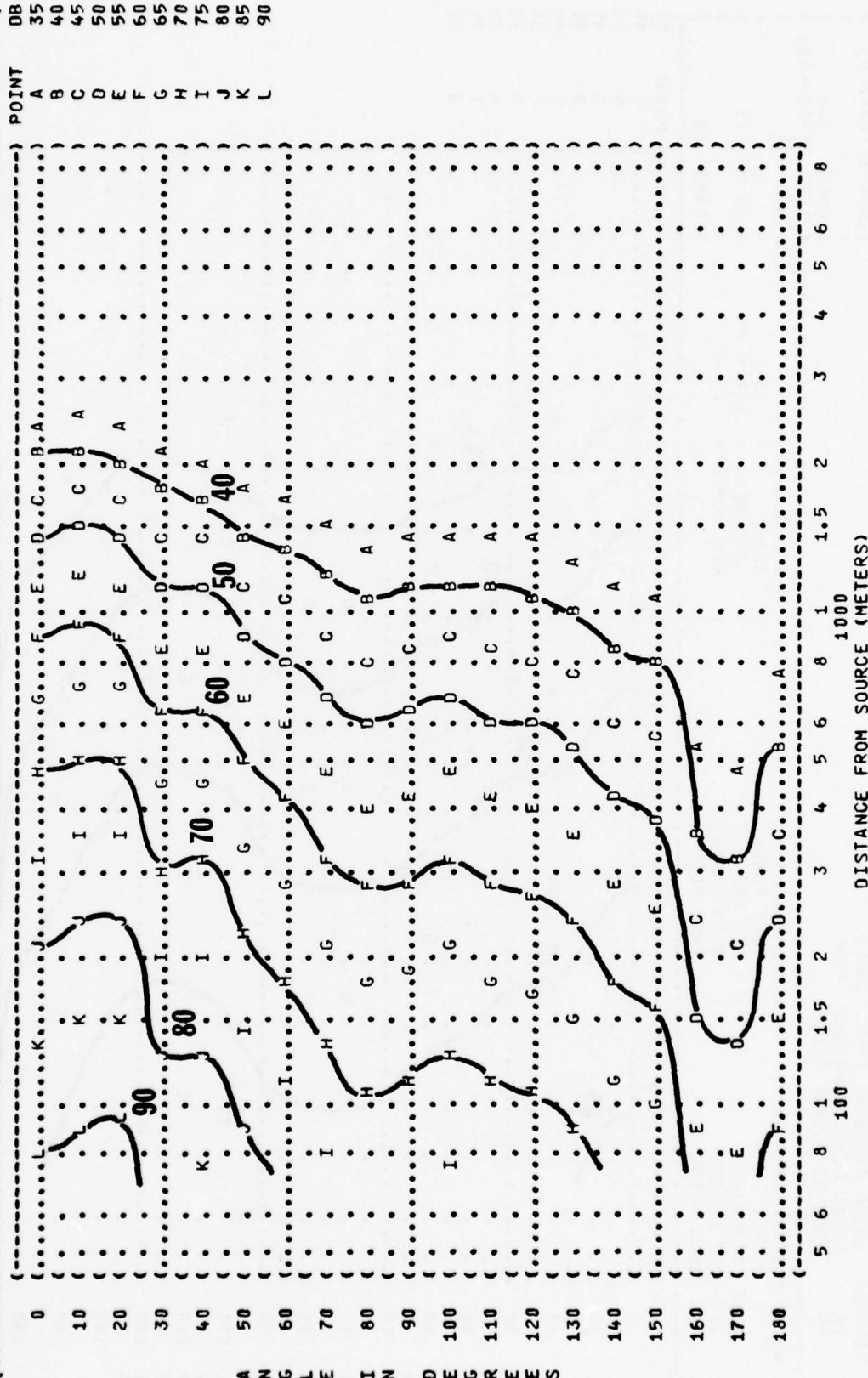


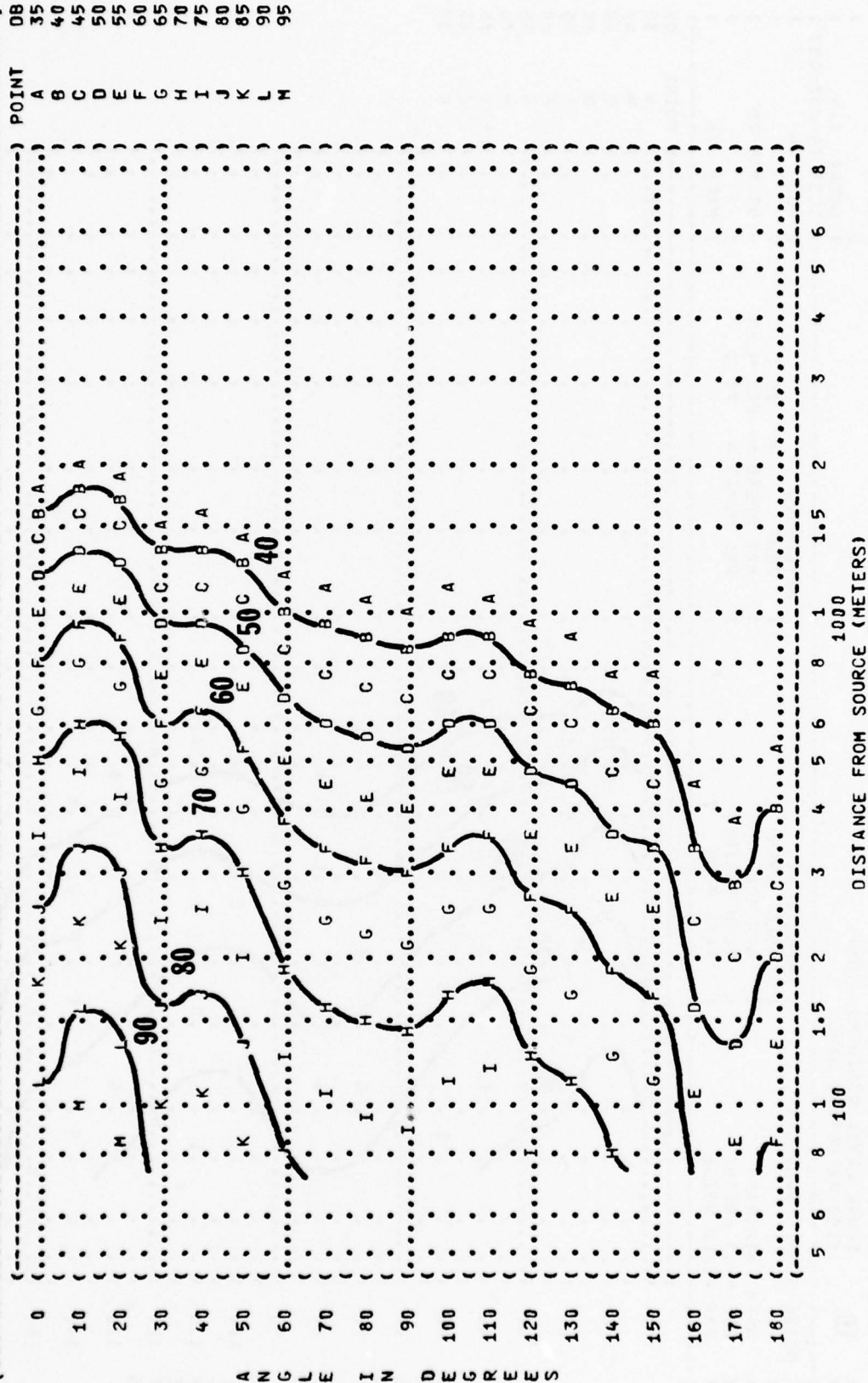
FIGURE 10 SOUND PRESSURE LEVEL (SPL)  
EQUAL LEVEL CONTOURS (DB)  
4000 HZ OCTAVE BAND

IDENTIFICATION:  
OMEGA 1.4  
TEST 75-002-003  
RUN 04  
05 MAY 75  
PAGE 25

NOISE SOURCE/SUBJECT:  
OPERATION:  
IDLE POWER  
60% RPM  
BOTH ENGINES  
FREE FLOW

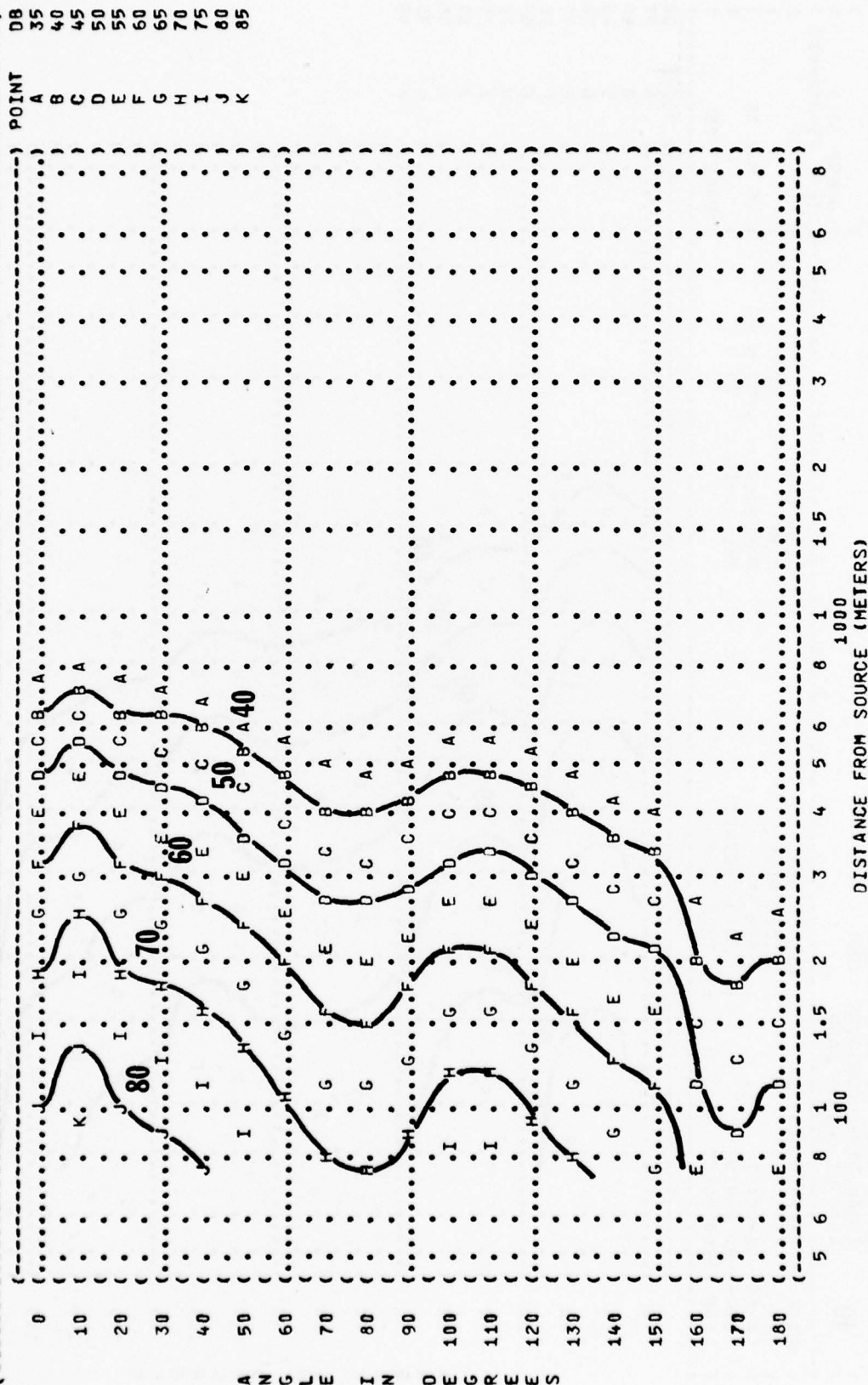
METEOROLOGY:  
TEMP = 15 C  
BAR PRESS = .760 M HG  
REL HUMID = 70 %

A-6A AIRCRAFT  
J52-P-8A ENGINE  
FAR FIELD NOISE





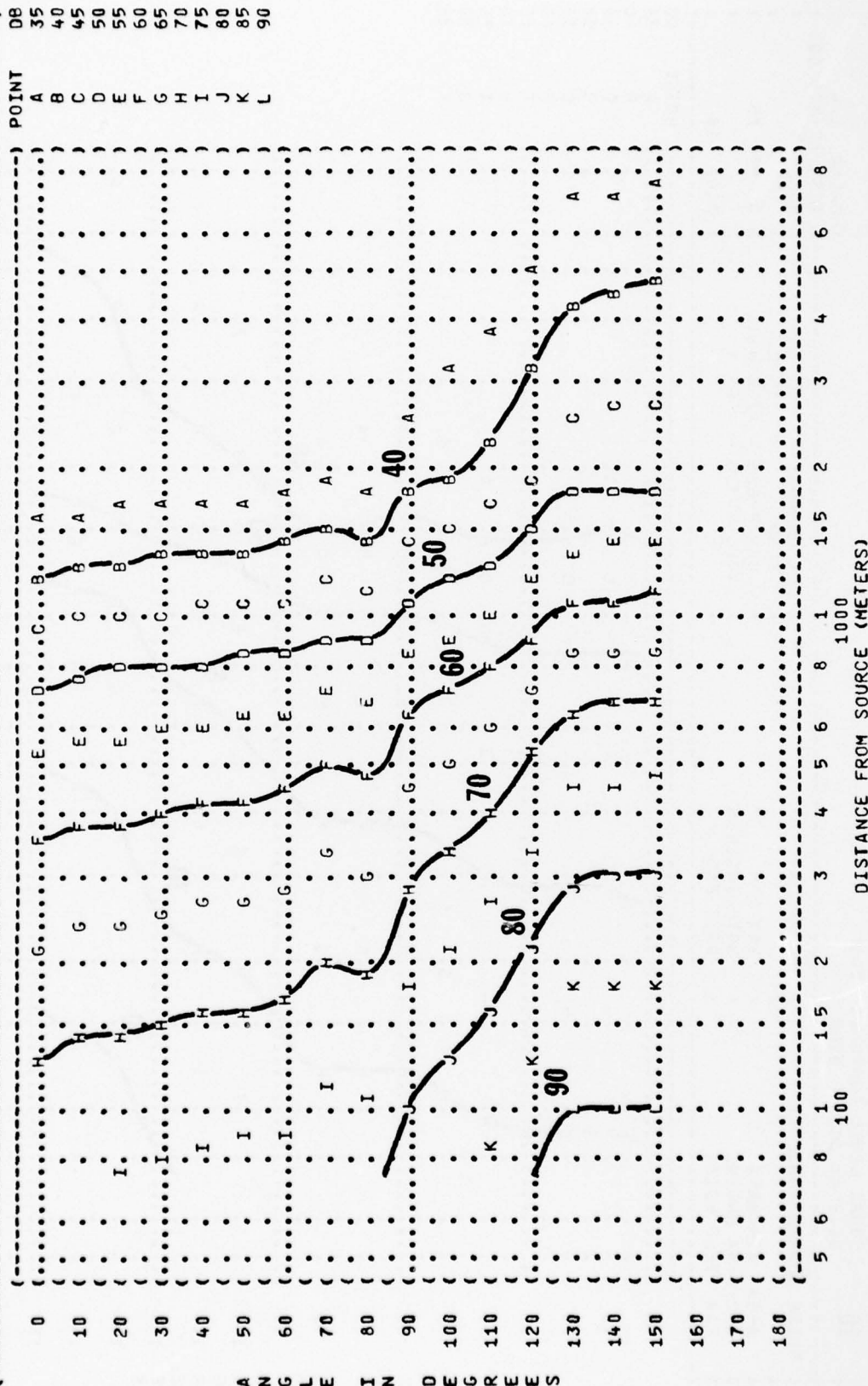
( FIGURE: SOUND PRESSURE LEVEL (SPL)  
 ( EQUAL LEVEL CONTOURS (DB)  
 ( 10 8000 HZ OCTAVE BAND  
 ( NOISE SOURCE/SUBJECT: ( OPERATION:  
 ( A-6A AIRCRAFT ( IDLE POWER  
 ( J52-P-8A ENGINE ( 60% RPM  
 ( FAR FIELD NOISE ( BOTH ENGINES  
 ( ( FREE FLOW  
 ( METEOROLOGY: TEMP = 15 C  
 ( BAR PRESS = .760 M HG  
 ( REL HUMID = 70 %  
 ( IDENTIFICATION:  
 ( OMEGA 1.4  
 ( TEST 75-002-003  
 ( RUN 04  
 ( 05 MAY 75  
 ( PAGE 26



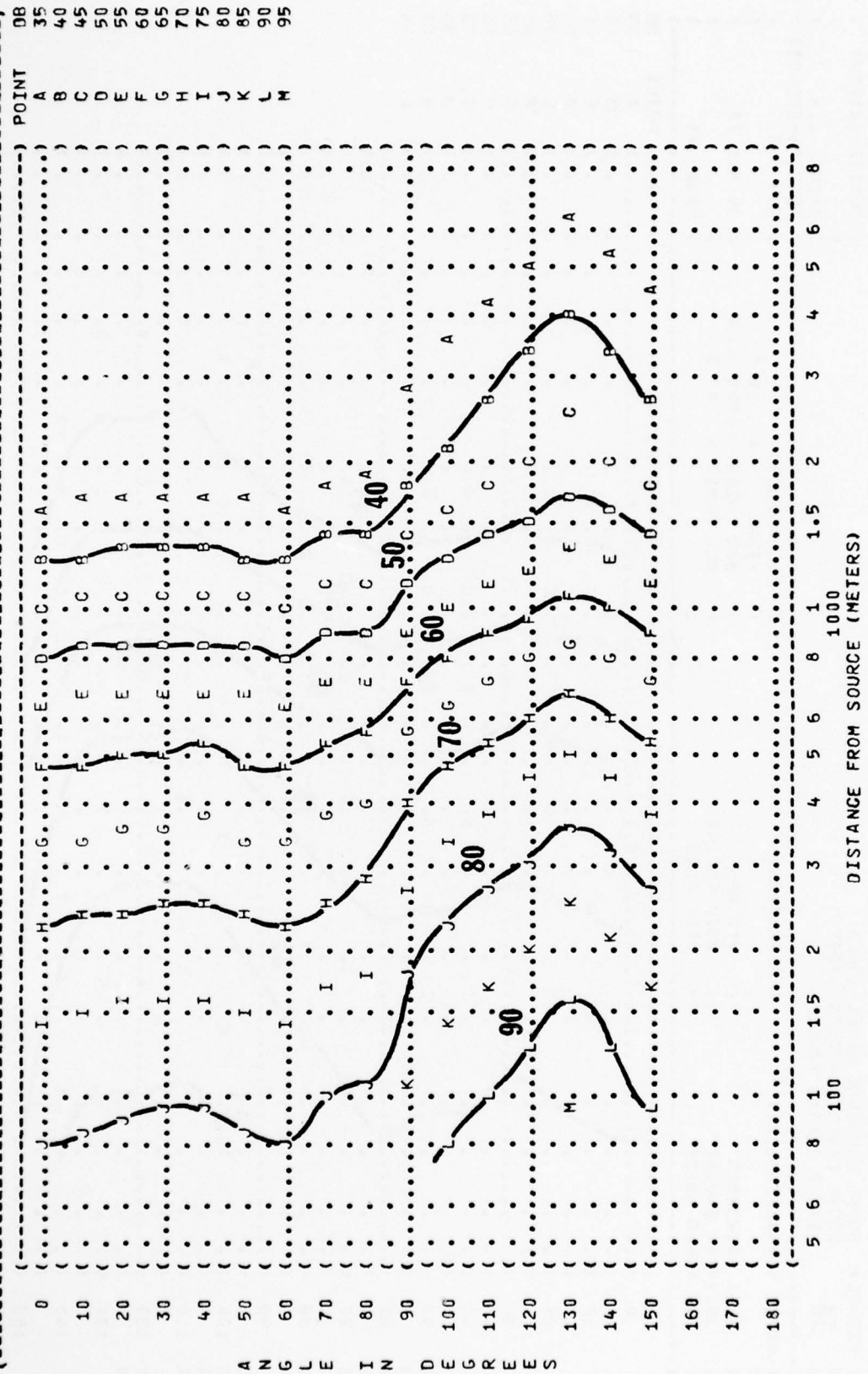




( FIGURE: SOUND PRESSURE LEVEL (SPL)  
 ( 10 EQUAL LEVEL CONTOURS (DB)  
 ( 63 HZ OCTAVE BAND  
 ( NOISE SOURCE/SUBJECT: ( OPERATION:  
 ( A-6A AIRCRAFT ( 75% RPM  
 ( J52-P-8A ENGINE ( BOTH ENGINES  
 ( FAR FIELD NOISE ( FREE FLOW  
 ( METEOROLOGY: TEMP = 15 C  
 ( BAR PRESS = .760 M HG  
 ( REL HUMID = 70 %  
 ( RUN 05  
 ( 05 MAY 75  
 ( PAGE 19  
 ( IDENTIFICATION:

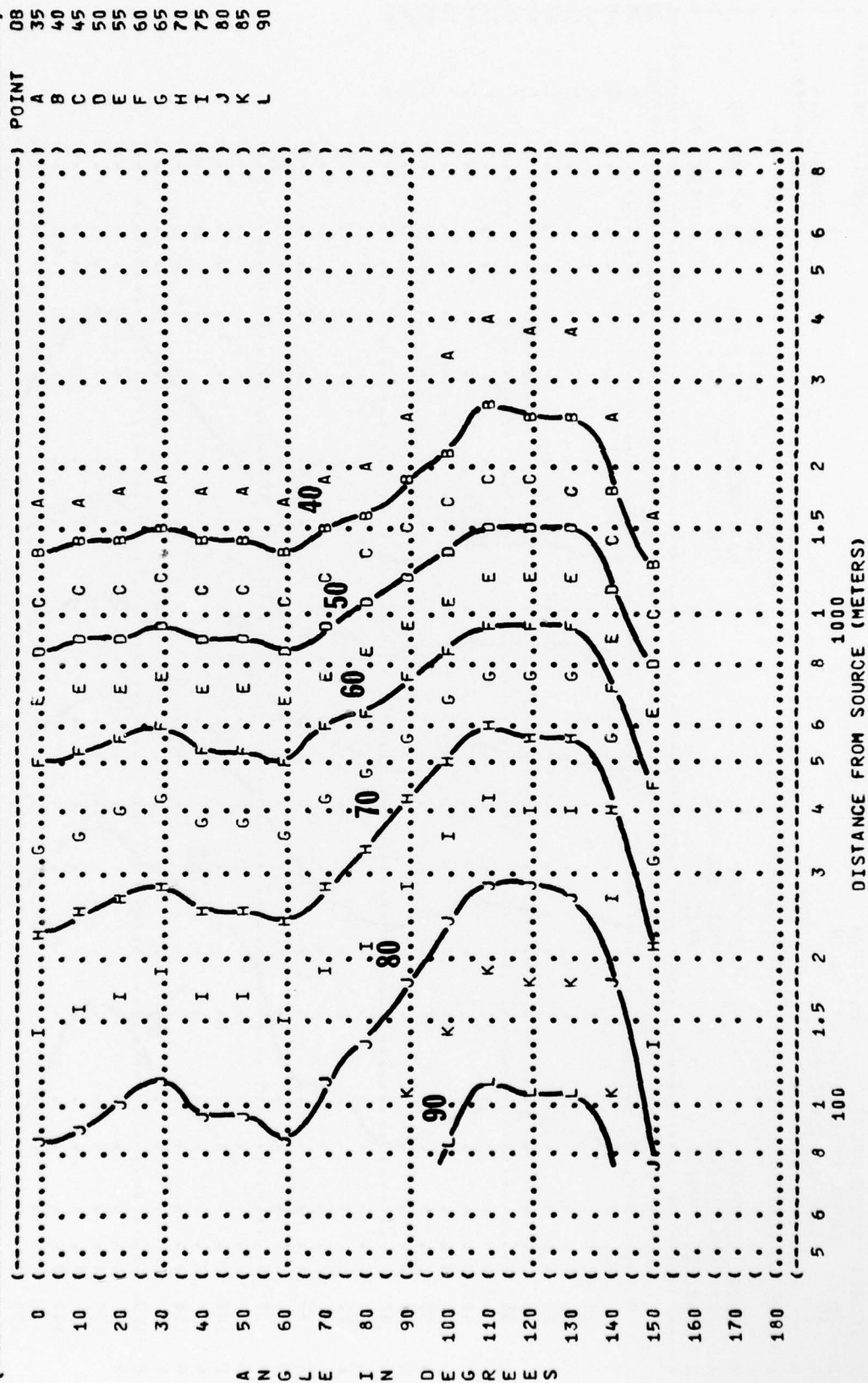


( FIGURE: SOUND PRESSURE LEVEL (SPL) )  
 ( 10 EQUAL LEVEL CONTOURS (DB) )  
 ( 125 HZ OCTAVE BAND )  
 ( NOISE SOURCE/SUBJECT: )  
 ( ( OPERATION: ) )  
 ( ( 75% RPM ) )  
 ( ( BOTH ENGINES ) )  
 ( ( FREE FLOW ) )  
 ( A-6A AIRCRAFT )  
 ( J52-P-8A ENGINE )  
 ( FAR FIELD NOISE )  
 ( METEOROLOGY: )  
 ( TEMP = 15 C )  
 ( BAR PRESS = .760 M HG )  
 ( REL HUMID = 70 % )  
 ( RUN 05 )  
 ( 05 MAY 75 )  
 ( PAGE 20 )  
 ( IDENTIFICATION: )  
 ( OMEGA 1.4 )  
 ( TEST 75-002-003 )



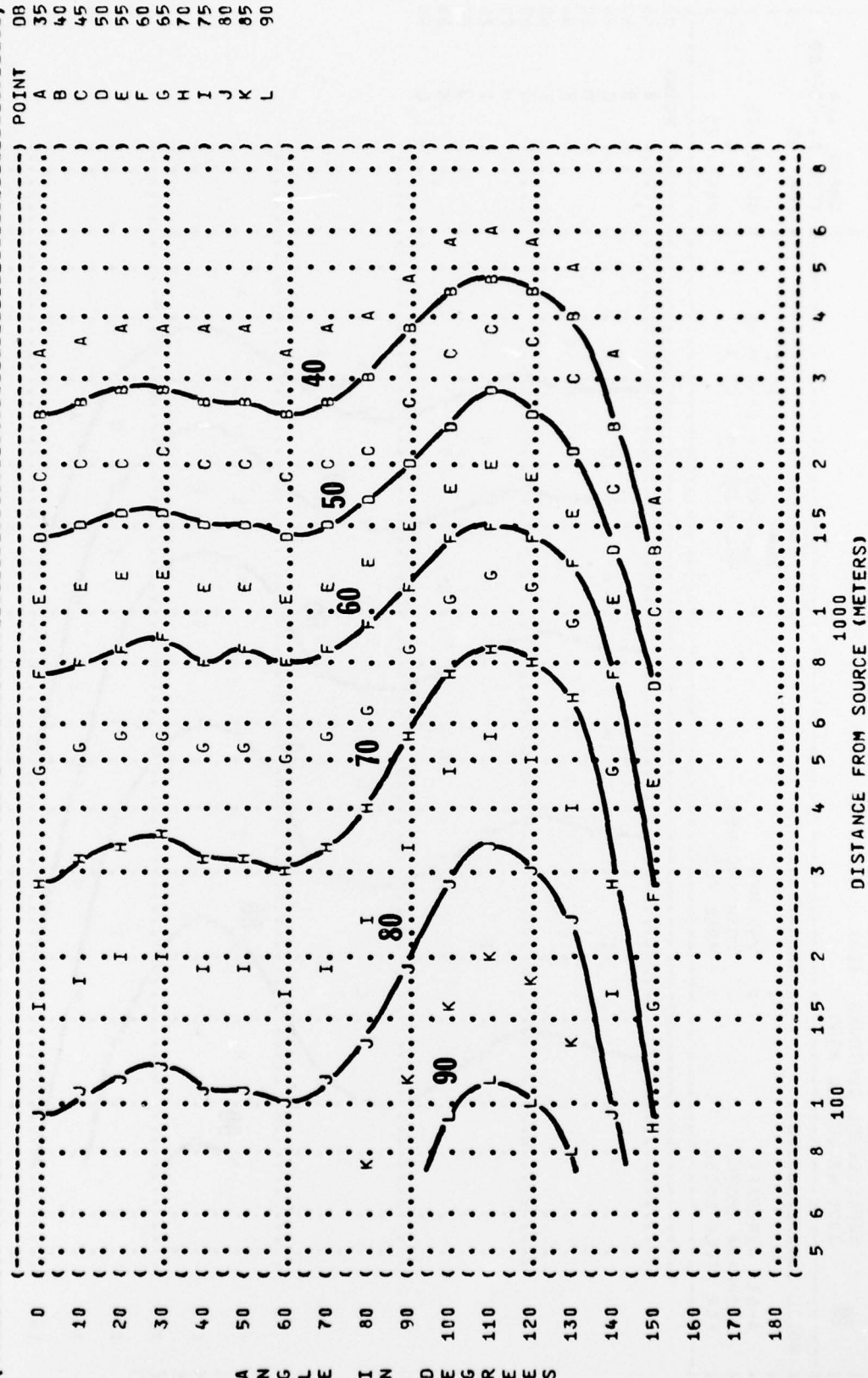


( ) FIGURE: SOUND PRESSURE LEVEL (SPL)  
 ( ) EQUAL LEVEL CONTOURS (DB)  
 ( ) 10 250 HZ OCTAVE BAND  
 ( ) NOISE SOURCE/SUBJECT: ( ) OPERATION:  
 ( ) A-6A AIRCRAFT ( ) 75% RPM  
 ( ) J52-P-8A ENGINE ( ) BOTH ENGINES  
 ( ) FAR FIELD NOISE ( ) FREE FLOW  
 ( ) METEOROLOGY: ( ) TEMP = 15 C  
 ( ) BAR PRESS = .760 M HG  
 ( ) REL HUMID = 70 %  
 ( ) IDENTIFICATION: ( ) OMEGA 1.4  
 ( ) TEST 75-002-003  
 ( ) RUN 05  
 ( ) 05 MAY 75  
 ( ) PAGE 21

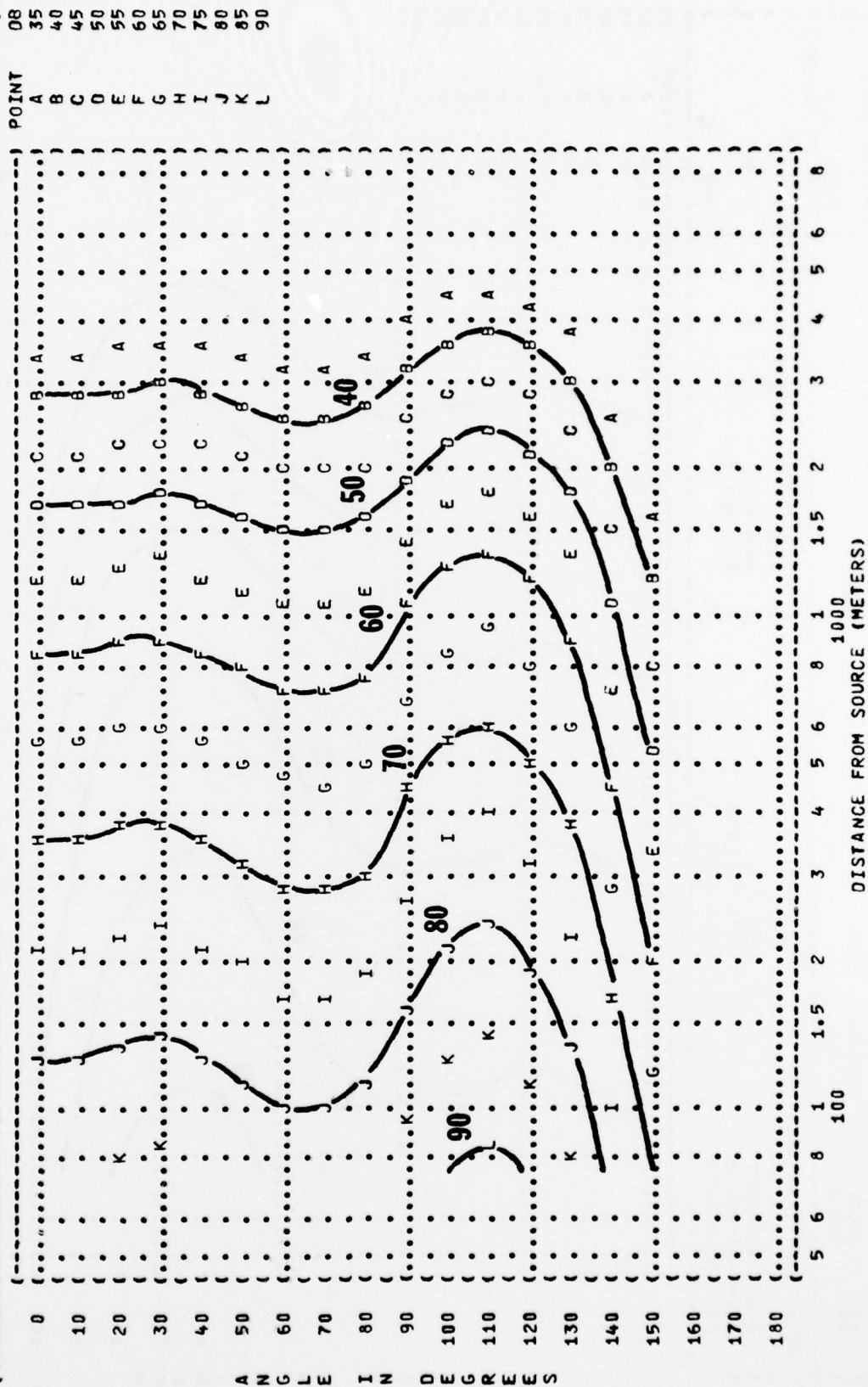




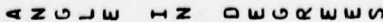
( FIGURE: SOUND PRESSURE LEVEL {SPL}  
 ( 10 EQUAL LEVEL CONTOURS (DB)  
 ( 500 HZ OCTAVE BAND  
 ( NOISE SOURCE/SUBJECT: ( OPERATION:  
 ( A-6A AIRCRAFT ( 75% RPM  
 ( J52-P-8A ENGINE ( BOTH ENGINES  
 ( FAR FIELD NOISE ( FREE FLOW  
 ( METEOROLOGY: ( TEMP = 15 C  
 ( BAR PRESS = .760 M HG  
 ( REL HUMID = 70 %  
 ( RUN 05  
 ( 05 MAY 75  
 ( PAGE 22  
 ( IDENTIFICATION:  
 ( OMEGA 1.4  
 ( TEST 75-002-003  
 (



( FIGURE: SOUND PRESSURE LEVEL (SPL)  
 ( EQUAL LEVEL CONTOURS (DB)  
 ( 10 1000 HZ OCTAVE BAND  
 ( NOISE SOURCE/SUBJECT: ( OPERATION:  
 ( A-6A AIRCRAFT ( 75% RPM  
 ( J52-P-8A ENGINE ( BOTH ENGINES  
 ( FAR FIELD NOISE ( FREE FLOW  
 ( METEOROLOGY: ( TEMP = 15 C  
 ( BAR PRESS = .760 M HG  
 ( REL HUMID = 70 %  
 ( 05 MAY 75  
 ( RUN 05  
 ( PAGE 23  
 ( IDENTIFICATION:  
 ( OMEGA 1.4  
 ( TEST 75-002-003  
 (

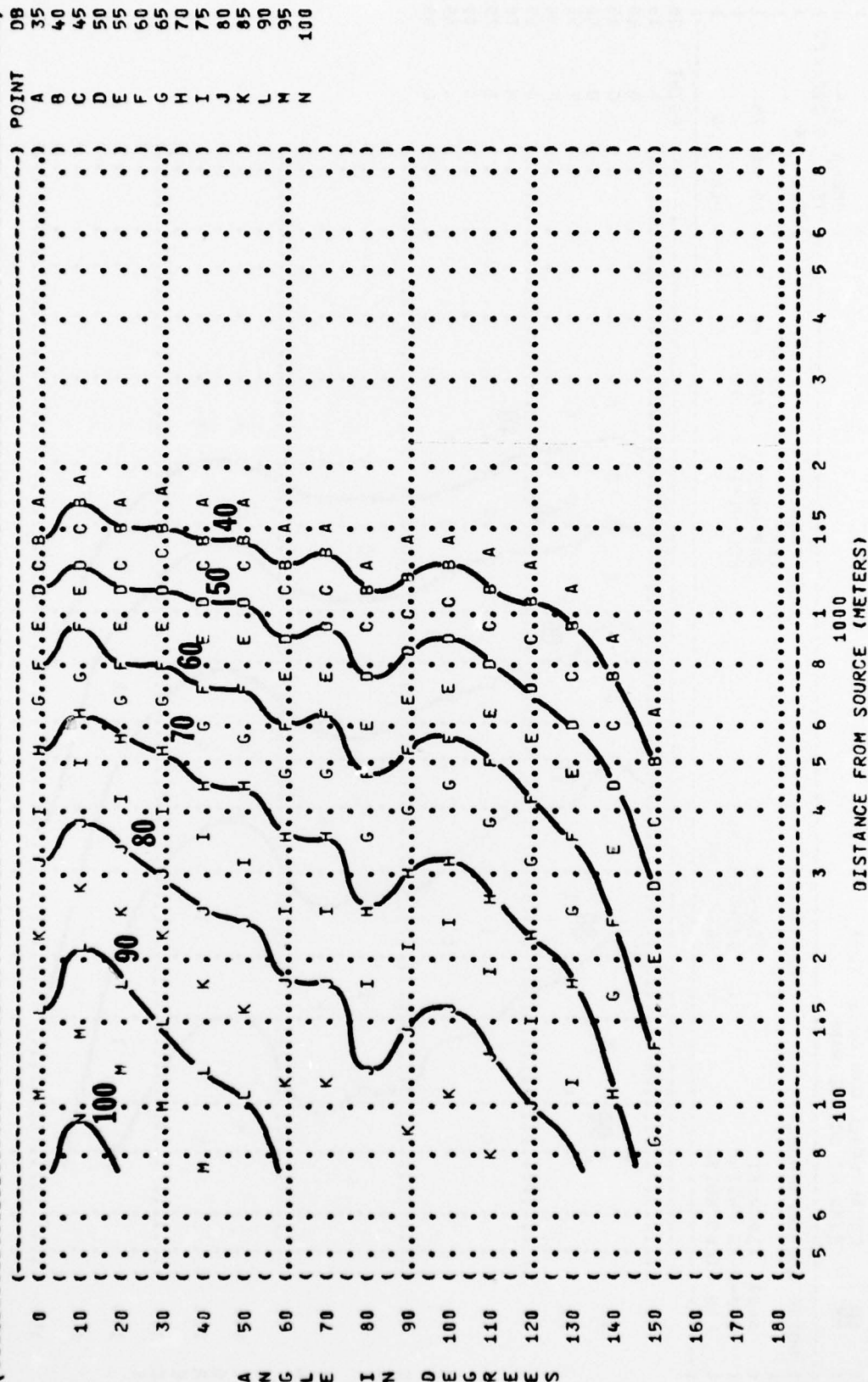


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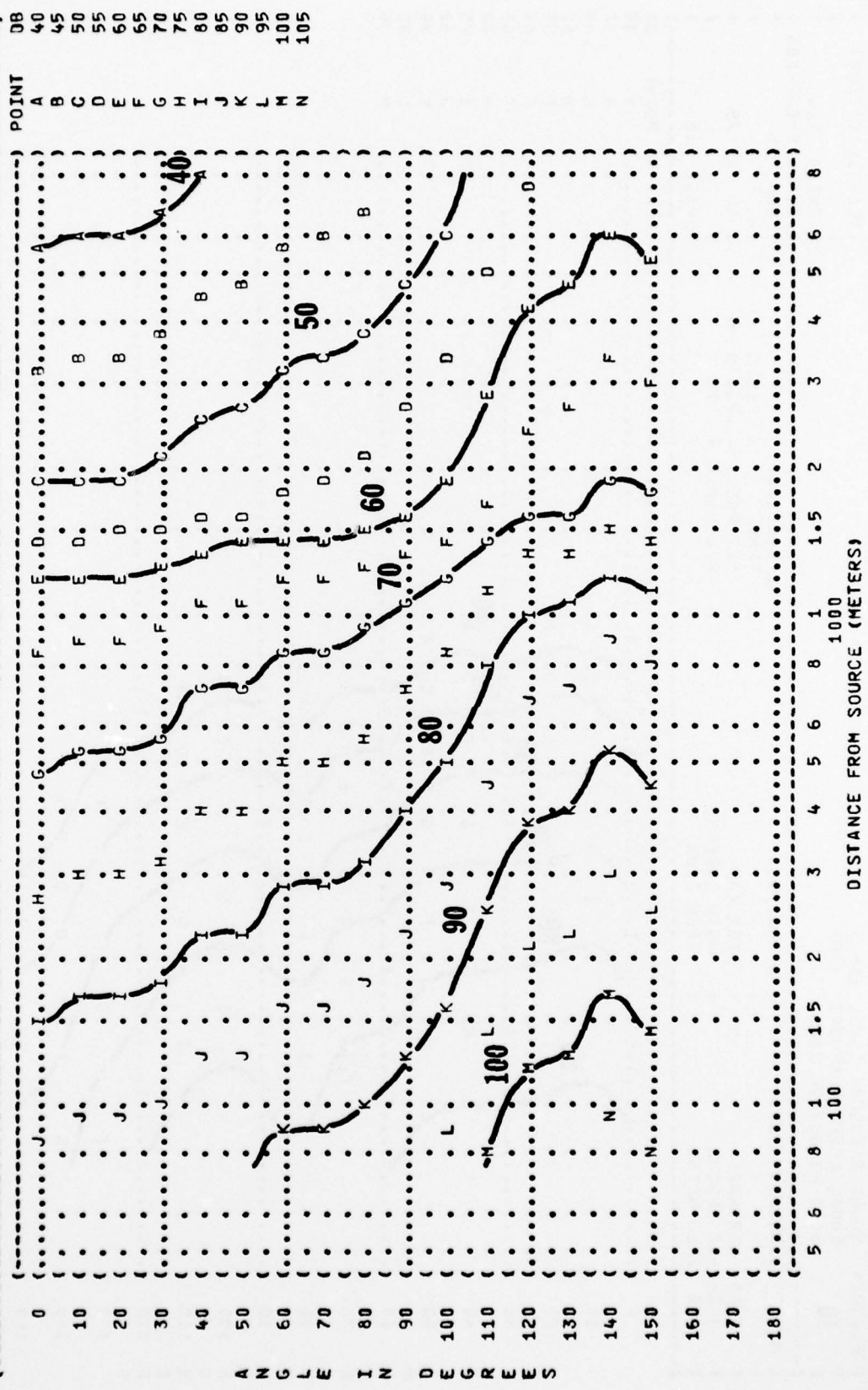
( FIGURE: SOUND PRESSURE LEVEL (SPL)  
 ( EQUAL LEVEL CONTOURS (DB)  
 ( 10 4000 HZ OCTAVE BAND  
 ( NOISE SOURCE/SUBJECT: ( OPERATION:  
 ( ( ( ( ( METEOROLOGY:  
 ( A-6A AIRCRAFT ( 75% RPM ( TEMP = 15 C  
 ( J52-P-8A ENGINE ( BOTH ENGINES ( BAR PRESS = .760 M HG  
 ( FAR FIELD NOISE ( FREE FLOW ( REL HUMID = 70 %  
 ( ( ( ( ( PAGE 25  
 ( IDENTIFICATION:  
 ( OMEGA 1.4  
 ( TEST 75-002-003  
 ( RUN 05  
 ( 05 MAY 75  
 (



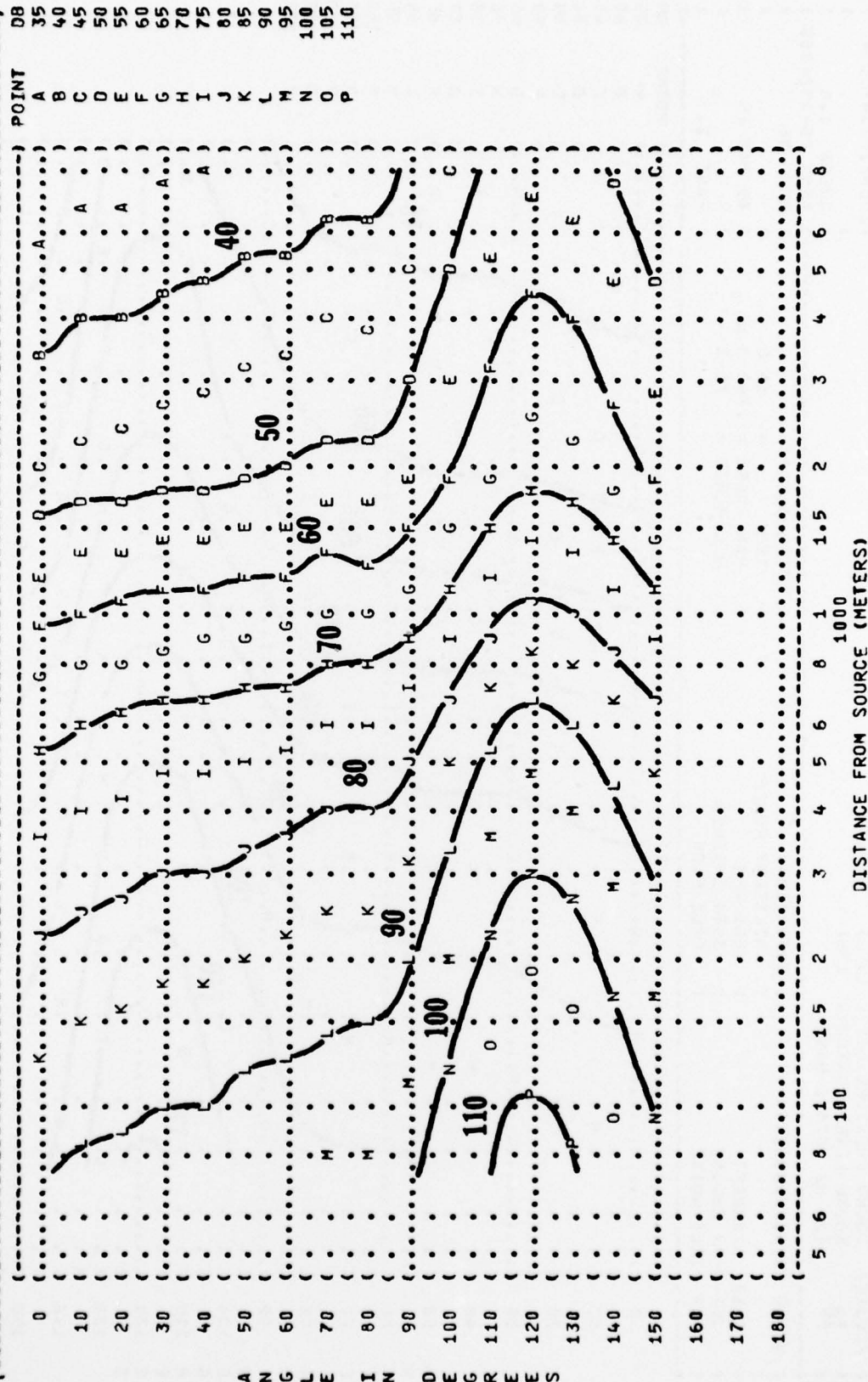




( FIGURE: SOUND PRESSURE LEVEL (SPL) )  
 ( 10 )  
 ( 31.5 HZ OCTAVE BAND )  
 ( NOISE SOURCE/SUBJECT: )  
 ( A-6A AIRCRAFT )  
 ( J52-P-8A ENGINE )  
 ( FAR FIELD NOISE )  
 ( OPERATION: )  
 ( MILITARY POWER )  
 ( 99% RPM )  
 ( BOTH ENGINES )  
 ( FREE FLOW )  
 ( METEOROLOGY: )  
 ( TEMP = 15 C )  
 ( BAR PRESS = .760 M HG )  
 ( REL HUMID = 70 % )  
 ( IDENTIFICATION: )  
 ( OMEGA 1.4 )  
 ( TEST 75-002-003 )  
 ( RUN 06 )  
 ( 05 MAY 75 )  
 ( PAGE 18 )



( FIGURE: SOUND PRESSURE LEVEL (SPL)  
 ( 10 EQUAL LEVEL CONTOURS (DB)  
 ( 63 HZ OCTAVE BAND  
 ( NOISE SOURCE/SUBJECT: ( OPERATION:  
 ( A-6A AIRCRAFT ( MILITARY POWER  
 ( J52-P-8A ENGINE ( 99% RPM  
 ( FAR FIELD NOISE ( BOTH ENGINES  
 ( ( FREE FLOW  
 ( METEOROLOGY:  
 ( TEMP = 15 C  
 ( BAR PRESS = .760 M HG  
 ( REL HUMID = 70 %  
 ( IDENTIFICATION:  
 ( OMEGA 1.4  
 ( TEST 75-002-003  
 ( RUN 06  
 ( 05 MAY 75  
 ( PAGE 19





**FIGURE 10** SOUND PRESSURE LEVEL {SPL} EQUAL LEVEL CONTOURS 125 HZ OCTAVE BAND

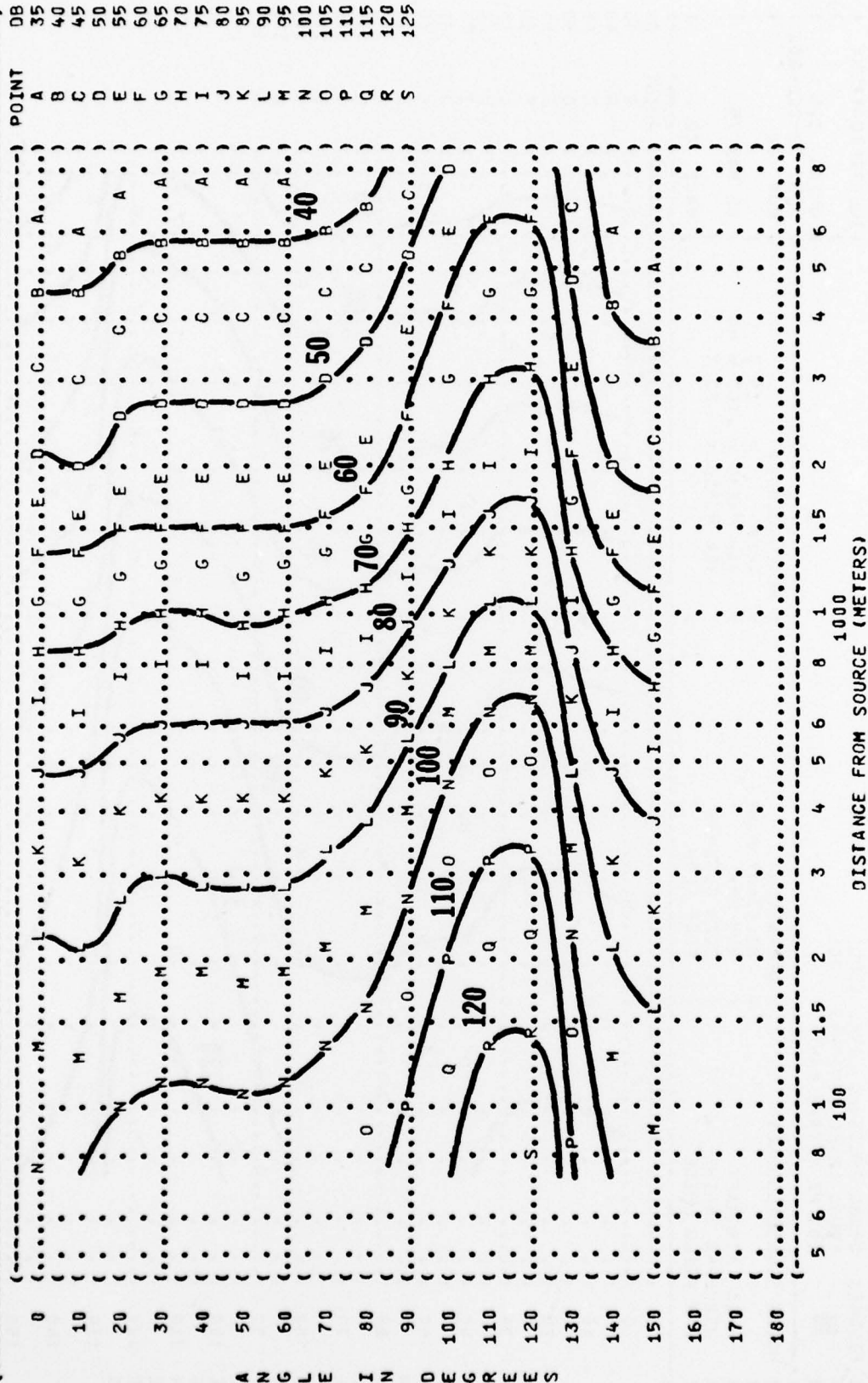
METEOROLOGY:  
TEMP = 15 C  
BAR PRESS = .760 M HG  
REL HUMID = 70 %

## POINT

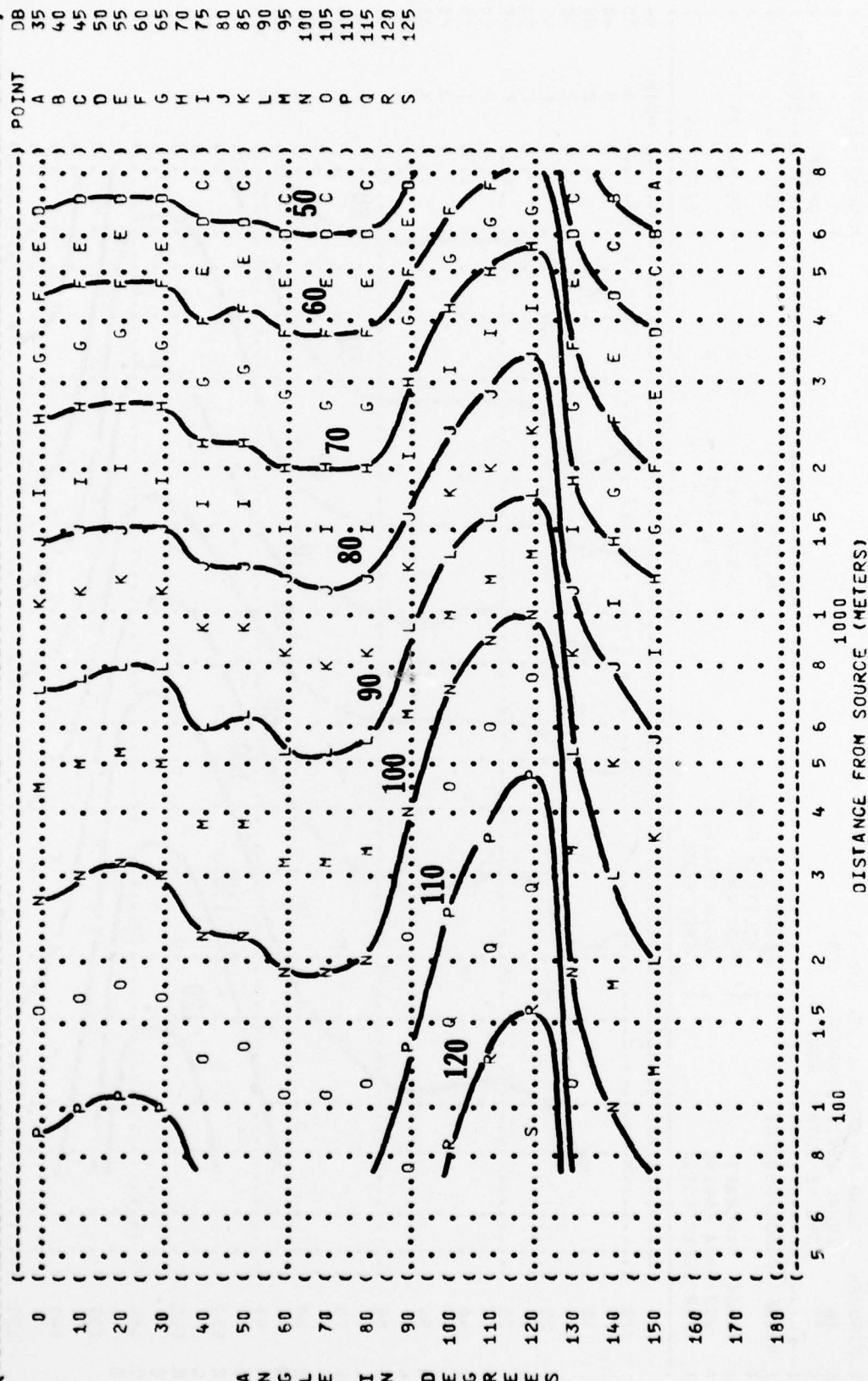
DISTANCE FROM SOURCE (METERS)



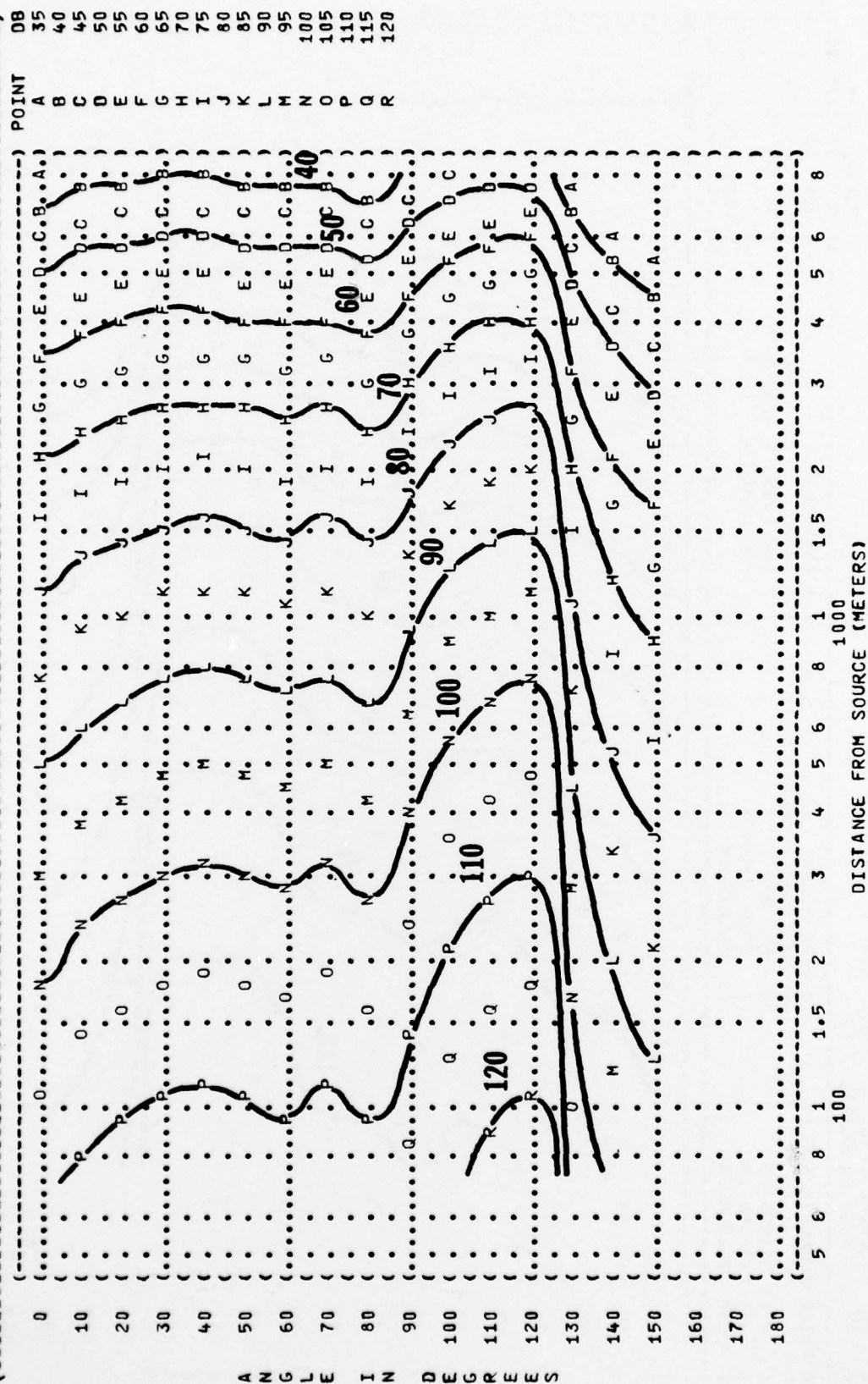
( FIGURE: SOUND PRESSURE LEVEL (SPL)  
 ( 10 EQUAL LEVEL CONTOURS (DB)  
 ( 250 HZ OCTAVE BAND  
 ( NOISE SOURCE/SUBJECT:  
 ( ( OPERATION:  
 ( ( MILITARY POWER  
 ( ( 99% RPM  
 ( ( BOTH ENGINES  
 ( ( FREE FLOW  
 ( A-6A AIRCRAFT  
 ( J52-P-8A ENGINE  
 ( FAR FIELD NOISE  
 ( METEOROLOGY:  
 ( TEMP = 15 C  
 ( BAR PRESS = .760 M HG  
 ( REL HUMID = 70 %  
 ( IDENTIFICATION:  
 ( OMEGA 1.4  
 ( TEST 75-002-003  
 ( RUN 06  
 ( 05 MAY 75  
 ( PAGE 21



( FIGURE: SOUND PRESSURE LEVEL (SPL)  
 ( 10 EQUAL LEVEL CONTOURS (DB)  
 ( 500 HZ OCTAVE BAND  
 ( NOISE SOURCE/SUBJECT:  
 ( OPERATION:  
 ( MILITARY POWER  
 ( 99% RPM  
 ( BOTH ENGINES  
 ( FREE FLOW  
 ( A-6A AIRCRAFT  
 ( J52-P-8A ENGINE  
 ( FAR FIELD NOISE  
 ( METEOROLOGY:  
 ( TEMP = 15 C  
 ( BAR PRESS = .760 M HG  
 ( REL HUMID = 70 %  
 ( IDENTIFICATION:  
 ( OMEGA 1.4  
 ( TEST 75-002-003  
 ( RUN 06  
 ( 05 MAY 75  
 ( PAGE 22



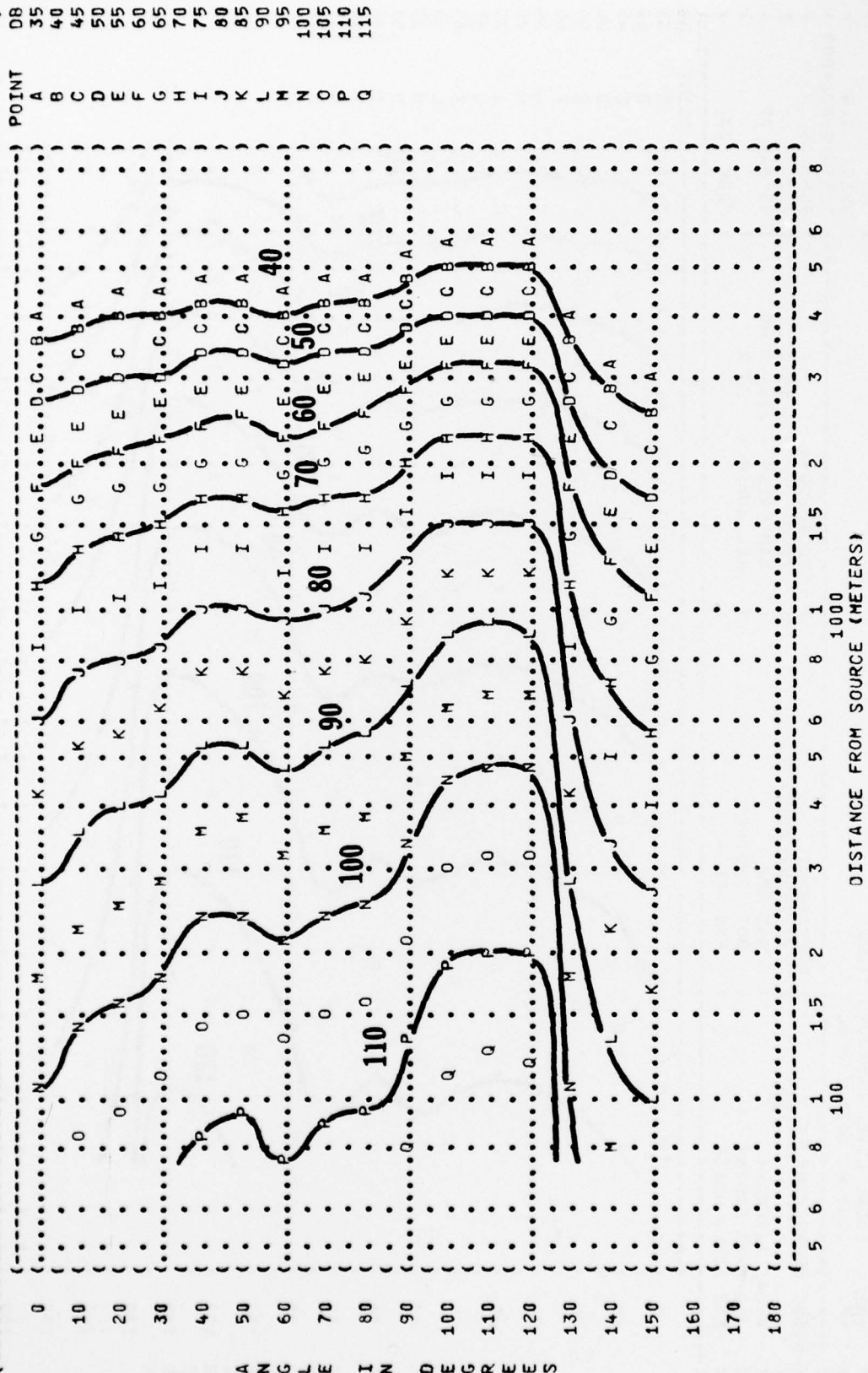
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( ( FIGURE: SOUND PRESSURE LEVEL {SPL} ) ) IDENTIFICATION: )
( ( EQUAL LEVEL CONTOURS (DB) ) ) )
( ( 10 ) ) OMEGA 1.4 )
( ( 1000 HZ OCTAVE BAND ) ) TEST 75-002-003 )
( ( NOISE SOURCE/SUBJECT: ) ) RUN 06 )
( ( OPERATION: ) ) )
( ( MILITARY POWER ) ) TEMP = 15 C )
( ( 99% RPM ) ) BAR PRESS = .760 M HG )
( ( BOTH ENGINES ) ) REL HUMID = 70 % )
( ( FREE FLOW ) ) PAGE 23 )
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AZUL HZ 050455Z



( FIGURE: SOUND PRESSURE LEVEL (SPL)  
 ( EQUAL LEVEL CONTOURS (DB)  
 ( 10 2000 HZ OCTAVE BAND  
 ( NOISE SOURCE/SUBJECT:  
 ( OPERATION:  
 ( A-6A AIRCRAFT  
 ( J52-P-8A ENGINE  
 ( FAR FIELD NOISE  
 ( METEOROLOGY:  
 ( TEMP = 15 C  
 ( BAR PRESS = .760 M HG  
 ( REL HUMID = 70 %  
 ( PAGE 24  
 ( IDENTIFICATION:  
 ( OMEGA 1.4  
 ( TEST 75-002-003  
 ( RUN 06  
 ( 05 MAY 75  
 (



ANGLES IN DEGREES





( FIGURE: SOUND PRESSURE LEVEL (SPL)  
 ( 10 EQUAL LEVEL CONTOURS (DB)  
 ( 8000 HZ OCTAVE BAND  
 ( NOISE SOURCE/SUBJECT:  
 ( A-6A AIRCRAFT  
 ( J52-P-8A ENGINE  
 ( FAR FIELD NOISE  
 ( OPERATION:  
 ( MILITARY POWER  
 ( 99% RPM  
 ( BOTH ENGINES  
 ( FREE FLOW  
 ( METEOROLOGY:  
 ( TEMP = 15 C  
 ( BAR PRESS = .760 M HG  
 ( REL HUMID = 70 %  
 ( IDENTIFICATION:  
 ( OMEGA 1.4  
 ( TEST 75-002-003  
 ( RUN 06  
 ( 05 MAY 75  
 ( PAGE 26

